Avaya Solution & Interoperability Test Lab

Application Notes for configuring CCT ContactPro V5 from CCT Deutschland GmbH with Avaya Aura® Application Enablement Services R7.1 and Avaya Aura® Call Center Elite Multichannel R6.5 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for CCT ContactPro to interoperate with Avaya Aura® Application Enablement Services and Avaya Aura® Call Center Elite Multichannel. CCT ContactPro is an interaction management application that can connect to both Avaya Aura® Application Enablement Services and Avaya Aura® Call Center Elite Multichannel.

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

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

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1. Introduction

These Application Notes describe the configuration steps required for CCT ContactPro V5 from CCT Deutschland GmbH, to interoperate with Avaya Aura® Application Enablement Services (AES) R7.1 and Avaya Aura® Call Center Elite Multichannel R6.5. CCT ContactPro solutions offer a variety of integrations into the Avaya call center environment supporting different Avaya platforms, to interact for multimedia agents as well as for voice only agents.

Note: CCT Contact Pro connects to Avaya Aura® Application Enablement Services allowing for basic call control for voice-only calls. For the setup and configuration of this solution, please refer to **Sections 5**, **6**, and **8**.

Note: CCT Contact Pro offers an add-on module which allows for multimedia calls by connecting to Avaya Aura® Call Center Elite Multichannel. For the setup and configuration of this add-on module please refer to the extra **Sections 7**, **8.2.2** and **8.2.3**.

CCT ContactPro is a solution for agent desktops in an Avaya call center environment focused on voice and multimedia, such as email and webchat. CCT ContactPro can be installed with enabled Presence Services and integrated Customer Data and empowers agents to efficiently serve customers by allowing the agents have full call control from the agents screen. CCT ContactPro is an interaction management application which utilises the TSAPI connection to gain call control of existing Avaya Aura® Communication Manager endpoints. Typically, these endpoints are desk phones Avaya Aura® Call Center Elite Multichannel agents are logged into.

CCT ContactPro offers a multi-channel agent desktop replacement for the current Avaya Aura® Call Center Elite Multichannel client. All Elite Multichannel channels (Voice, Chat and Email) are unified into one convenient desktop that reflects the customer being interacted with and the channel being used.

CCT ContactPro can also connect to Avaya Proactive Outreach Manager for Outbound campaigns in Preview, Progressive or Predictive modes.

2. General Test Approach and Test Results

The general test approach was to validate successful handling of inbound skillset/VDN calls using CCT ContactPro. This was performed by calling inbound to a VDN and/or outbound from the elite call center using CCT ContactPro to answer calls. Where applicable, agent actions were performed using both the physical phone and CCT ContactPro Agent client in synchronisation.

CCT ContactPro can be used to answer and respond to Voice, Email and Webchat requests from “customers”. Test cases are selected to exercise a sufficiently broad segment of functionality to have a reasonable expectation of interoperability in production configurations.

CCT ContactPro software was installed on each client PC utilised by an agent. A configuration file on this software points to a database that was created on an existing Avaya Aura® Call

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Center Elite Multichannel database server, this being a standalone MS SQL server that hosts the Avaya Aura® Call Center Elite Multichannel database.

Avaya SIP endpoints were included in the compliance testing and these endpoints are registered with Session Manager. An assumption is made that Session Manager and System Manager are already installed and basic configuration have been performed.

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.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in this DevConnect Application Note included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Avaya Aura® Call Center Elite Multichannel and CCT ContactPro utilized security features that were available to them by connecting on secure ports to the Avaya Aura® Call Center Elite Multichannel as requested by CCT Deutschland GmbH. All other connections were as default.

2.1. Interoperability Compliance Testing

The testing focuses on the following areas:

- **Agent state change**– Login, Ready/Not Ready using CCT ContactPro Agent.
- **Inbound Calls** – Answer calls using CCT ContactPro Agent.
- **Outbound Calls** – Make calls using CCT ContactPro Agent.
- **Hold/Transfer/Conference** – Place callers on hold and transfer and conference using CCT ContactPro Agent.
- **Multimedia calls** – Email and Webchat.
- **Serviceability Testing** - Verify the ability of CCT ContactPro to recover from disconnection and reconnection to the Avaya solution.

2.2. Test Results

All test cases passed successfully. The following observations were noted.

- Upon logging into CCT ContactPro using a valid Communication Manager desk phone, there is no need for any password for the extension even though it asks for one. However, the correct extension password is required when Telecommuter mode is used

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during login. **Note:** Telecommuter requires "softphone = y" in the station settings as well as additional licenses, AES DMCC Station License and ACM IP_A Station Licenses.

- Blind Conference is not supported on CCT ContactPro. This is also the standard behaviour of the Avaya EMC Client.
- When an email item is opened from the Agent History the agent goes to active but there is no VDN phantom call present. This is also the standard behaviour of the Avaya EMC Client.

2.3. Support

Support for CCT Deutschland GmbH products can be obtained as follows:

WEBSITE
www.cct-solutions.com

CONTACT
Europe Phone: +49 69 7191 4969 0
U.S. Phone +1 786 738 5253
Email: contact@cct-solutions.com

SUPPORT
Europe Hotline: +49 821 455152 455
U.S. Hotline: +1-305-985-5485
Email: helpdesk@cct-solutions.com

CCT Deutschland GmbH
Voltastrasse 81
60486 Frankfurt am Main
Germany
Phone +49 69 7191 4969 0
Fax +49 69 7191 4969 666

Street Werner-von-Siemens-Strasse 6
86159 Augsburg
Germany

CCT Europe GmbH
Sumpfstrasse 26
6312 Steinhausen
Swiss
Phone. +41 41 748 42 22
Fax +41 41 748 42 23

CCT Software LLC
1735 Market Street STE 3750
19103 Philadelphia, PA
USA
Phone: +1 267 507 6196

1801 N.E. 123rd Street, Suite 314
North Miami, 33181 FL
Phone +1 786 738 5253

USA
Office +1 786 738 5253

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3. Reference Configuration

The configuration in **Figure 1** was used to compliance test CCT ContactPro with Avaya Elite Multichannel and AES using a CTI connection through AES to gain call control of the Avaya Elite Multichannel agents.

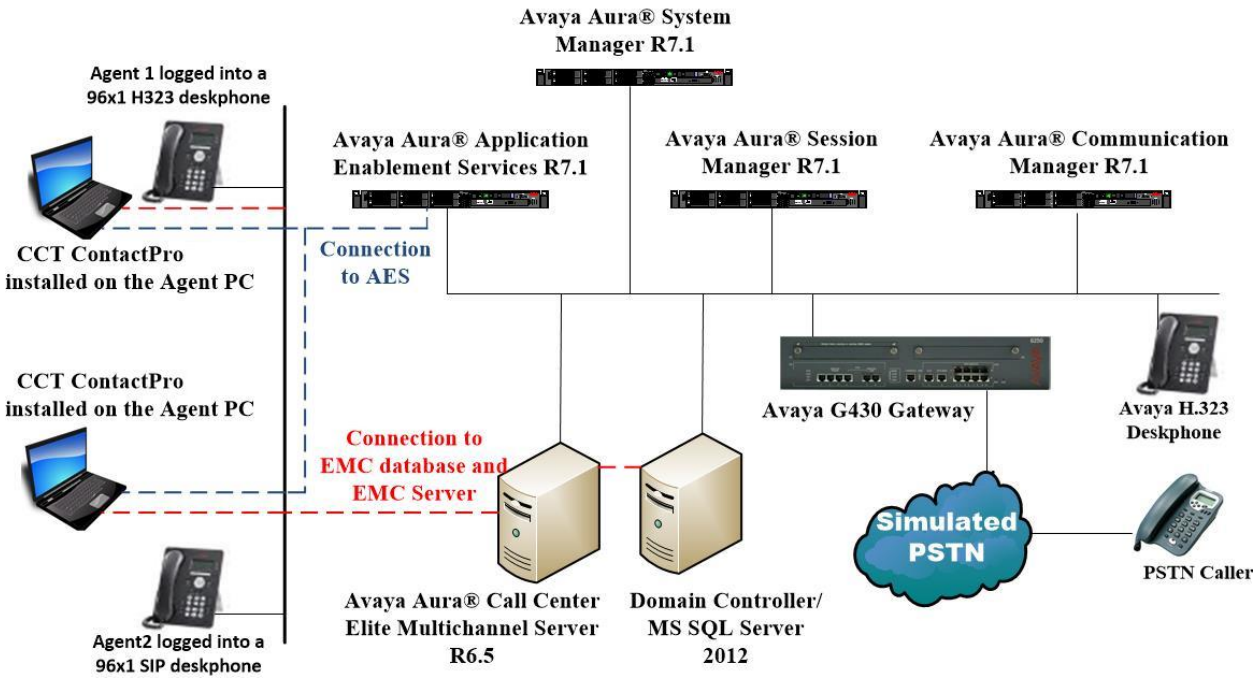

Figure 1: Connection of CCT ContactPro with Avaya Aura® Application Enablement Services R7.1 and Avaya Aura® Call Center Elite Multichannel R6.5

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The configuration in **Figure 2** describes a more detailed Voice Only environment for CCT ContactPro.

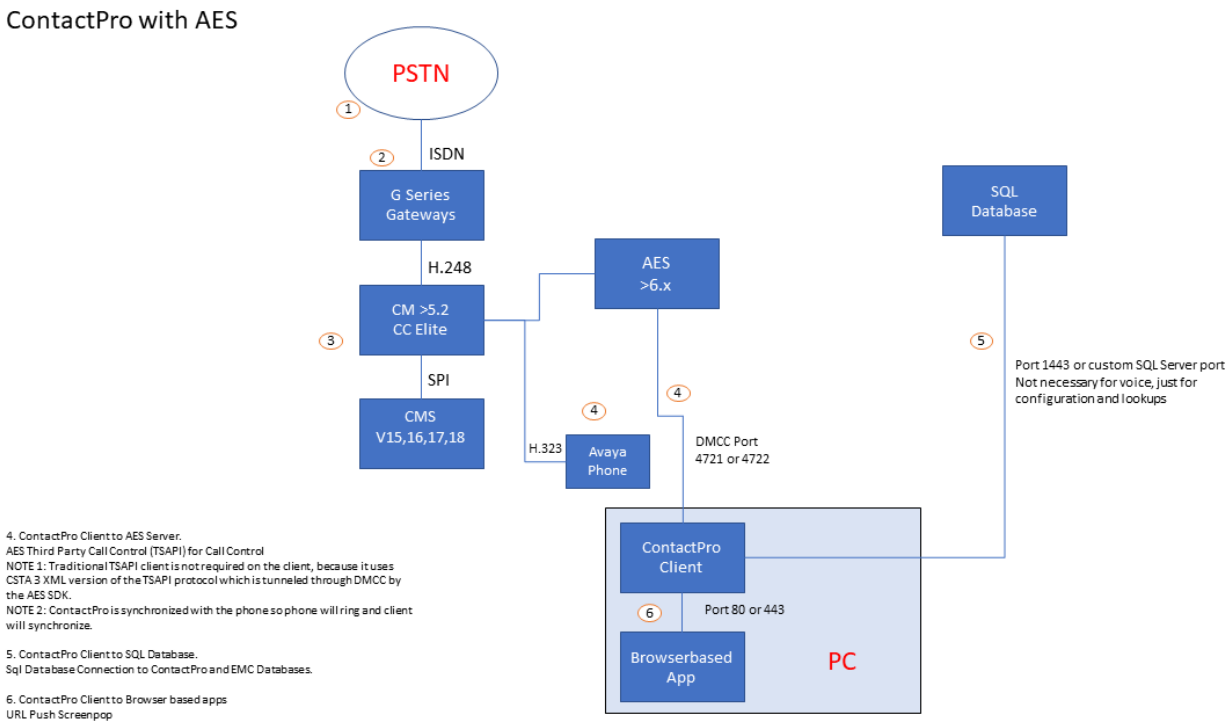

Figure 2: Connection of CCT ContactPro with Other Components in a Voice Only Environment

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The configuration in **Figure 3** describes a more detailed EMC Multimedia environment for CCT ContactPro.

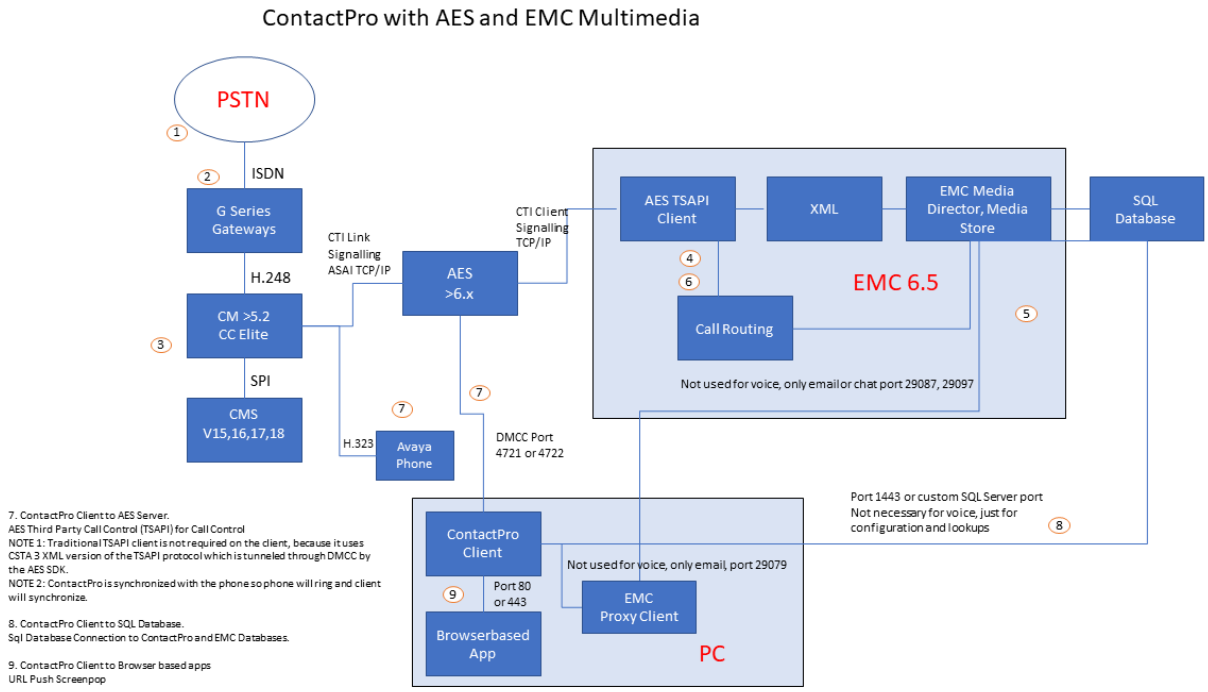

Figure 3: Connection of CCT ContactPro with Other Components in an EMC Multimedia Environment

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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® System Manager running on a Virtual Server	System Manager 7.1.1.0 Build No. - 7.1.0.0.1125193 Software Update Revision No: 7.1.1.0.046931 Feature Pack 1 Service Pack 1
Avaya Aura® Session Manager running on a Virtual Server	Session Manager R7.1 SP1 Build No. – 7.1.1.0.711008
Avaya Aura® Communication Manager running on Virtual Server	R017x.01.0.532.0 R7.1.1.0.0 - FP1 Update ID 01.0.532.0-23985
Avaya Aura® Application Enablement Services running on a Virtual Server	R7.1.0.0.0.17-0
Avaya Aura® Call Center Elite Multichannel running on Virtual Server	R6.5.0
Avaya G430 Gateway	37.42.0 /1
Avaya 96x1 H.323 Deskphone	96x1 H.323 Release 6.6401
Avaya 96x1 SIP Deskphone	96x1 SIP Release 7.1.0.1.1
CCT ContactPro - Client Agent Desktop	V5.0.0.790

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5. Configure Avaya Aura® Communication Manager

The information provided in this section describes the configuration of Communication Manager relevant to this solution. For all other provisioning information, such as initial installation and configuration, please refer to the product documentation in **Section 11**.

The configuration illustrated in this section was performed using Communication Manager System Administration Terminal (SAT).

5.1. Configure the Avaya Aura® Communication Manager Connection to Avaya Aura® Application Enablement Services

The connection between Communication Manager and AES is assumed to be already in place; however, the steps required to set this connection are listed in the sections below.

5.1.1. Verify System Features

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

5.1.2. Note procr IP Address for Avaya Aura® Application Enablement Services Connectivity

Display the procr IP address by using the command **display node-names ip** and noting the IP address for the **procr** and AES (**AES71vmpg**).

```
display node-names ip                                           Page   1 of   2
                                  IP NODE NAMES
    Name               IP Address
SM100               10.10.40.52
AES71vmpg           10.10.40.43
default             0.0.0.0
g430                10.10.40.15
procr               10.10.40.47
```


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5.1.3. Configure Transport Link for Avaya Aura® Application Enablement Services Connectivity

To administer the transport link to AES, use the **change ip-services** command. On **Page 1,** add an entry with the following values:

- **Service Type:** Should be set to **AESVCS**.
- **Enabled:** Set to **y**.
- **Local Node:** Set to the node name assigned for the **procr** in **Section 5.1.2**.
- **Local Port:** Retain the default value of **8765**.

```
change ip-services                                              Page   1 of   4

                                     IP SERVICES
 Service      Enabled     Local        Local       Remote      Remote
  Type                    Node         Port        Node        Port
AESVCS         y          procr        8765
```

Go to **Page 4** of the **ip-services** form and enter the following values:

- **AE Services Server:** Name obtained from the AES server, in this case **AES71vmpg**.
- **Password:** Enter a password to be administered on the AES server.
- **Enabled:** Set to **y**.

Note: The password entered for **Password** field must match the password on the AES server in **Section 6.2**. The **AE Services Server** must match the administered name for the AES server; this is created as part of the AES installation, and can be obtained from the AES server by typing **uname –n** at the Linux command prompt.

```
change ip-services                                              Page   4 of   4
                            AE Services Administration

   Server ID    AE Services       Password          Enabled    Status
                   Server
      1:        AES71vmpg         ********          y          idle
      2:
      3:
```

5.1.4. Configure CTI Link for TSAPI Service

Add a CTI link using the **add cti-link n** command. Enter an available extension number in the **Extension** field. 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: 2002
     Type: ADJ-IP
                                                                      COR: 1
     Name: AES71vmpg
```


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5.2. Configure Routing on Avaya Aura® Communication Manager

This section shows the steps required to add a new service or skill on Communication Manager. Services are accessed by calling a Vector Directory Number (VDN) which points to a hunt group associated with an agent. Queues are created on EMC, for example, "Webchat for Sales" or "Email for Support" and each queue is assigned a VDN on Communication Manager. The following sections give step by step instructions on how to add the following:

- VDN
- Vector
- Hunt Group
- Agent
- Phantom extension

This procedure is required for every queue that is added on EMC both for voice or multimedia, the following sections will show the required steps to add one agent and the necessary routing for a "Webchat" queue on EMC.

5.2.1. Add VDN

To add a VDN type **add vdn x**, where x is a VDN number. Enter a suitable name for example the **VDN 2920** below will be used exclusively for the **Sales Webchat** queue on EMC.

```
add vdn 2920                                                    Page   1 of   3
                            VECTOR DIRECTORY NUMBER

                             Extension: 2920
                                 Name*: Sales Webchat
                           Destination: Vector Number        2920
                    Attendant Vectoring? n
                   Meet-me Conferencing? n
                     Allow VDN Override? n
                                   COR: 1
                                   TN*: 1
                              Measured: none
        VDN of Origin Annc. Extension*:
                            1st Skill*:
                            2nd Skill*:
* Follows VDN Override Rules
```


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5.2.2. Add Vector

To administer the vector used by the VDN in **Section 5.2.1,** type **change vector x** where x is the vector number. The example below shows the call queuing to skill or hunt group 920 (queue-to skill **920**).

```
change vector 2920                                          Page   1 of   6
                                 CALL VECTOR

    Number: 2920             Name: Sales Webchat
Multimedia? n      Attendant Vectoring? n    Meet-me Conf? n           Lock? n
     Basic? y   EAS? y   G3V4 Enhanced? y   ANI/II-Digits? y   ASAI Routing? y
 Prompting? y   LAI? y  G3V4 Adv Route? y   CINFO? y   BSR? y   Holidays? y
 Variables? y   3.0 Enhanced? y
01 adjunct      routing link 1
02 wait-time    2   secs hearing silence
03 queue-to     skill 920  pri m
04 wait-time    10  secs hearing ringback
05 queue-to     skill 920  pri m
06 wait-time    10  secs hearing ringback
07 disconnect   after announcement none
08
09
10
11
12
```

5.2.3. Add Hunt Group

To add a new skillset or hunt group type, **add hunt-group x** where x is the new hunt group number. For example the hunt group **920** is added for the **Sales_webchat** queue. Ensure that **ACD**, **Queue** and **Vector** are all set to **y**. Also that **Group Type** is set to **ucd-mia**.

```
add hunt-group 920                                          Page   1 of   4
                                 HUNT GROUP

            Group Number: 920                              ACD? y
              Group Name: Sales_Webchat                  Queue? y
         Group Extension: 1920                          Vector? y
              Group Type: ucd-mia
                      TN: 1
                     COR: 1                     MM Early Answer? n
           Security Code:                Local Agent Preference? n
 ISDN/SIP Caller Display:

             Queue Limit: unlimited
 Calls Warning Threshold:      Port:
  Time Warning Threshold:      Port:
```


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On **Page 2** ensure that **Skill** is set to **y** as shown below.

```
add hunt-group 920                                          Page   2 of   4
                                 HUNT GROUP

                   Skill? y      Expected Call Handling Time (sec): 180
                     AAS? n
                Measured: none
     Supervisor Extension:


      Controlling Adjunct: none




   Multiple Call Handling: none


 Timed ACW Interval (sec):          After Xfer or Held Call Drops? n
```

5.2.4. Add Agent

To add a new agent type **add agent-loginID x**, where x is the login id for the new agent.

```
add agent-loginID 4405                                   Page   1 of   3
                                 AGENT LOGINID

                Login ID: 4405                                  AAS? n
                    Name: Paul                                AUDIX? n
                      TN: 1        Check skill TNs to match agent TN? n
                     COR: 1
           Coverage Path:                             LWC Reception: spe
           Security Code:                     LWC Log External Calls? n
                                            AUDIX Name for Messaging:

                                       LoginID for ISDN/SIP Display? n
                                                           Password:
                                             Password (enter again):
                                                        Auto Answer: station
                                                  MIA Across Skills: system
                                          ACW Agent Considered Idle: system
                                          Aux Work Reason Code Type: system
                                            Logout Reason Code Type: system
                       Maximum time agent in ACW before logout (sec): system
                                           Forced Agent Logout Time:   :
    WARNING:  Agent must log in again before changes take effect
```


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On **Page 2,** add the required skills. Note that the skill **920** is added to this agent so when a webchat call for "Sales" is initiated, the call is routed correctly to this agent.

```
add agent-loginID 4405                                          Page   2 of   3
                                   AGENT LOGINID
      Direct Agent Skill:                                Service Objective? n
Call Handling Preference: skill-level                Local Call Preference? n

    SN   RL SL          SN   RL SL          SN   RL SL          SN   RL SL
 1: 900     1       16:                 31:                 46:
 2: 910     1       17:                 32:                 47:
 3: 920     1       18:                 33:                 48:
 4: 930     1       19:                 34:                 49:
 5:                 20:                 35:                 50:
 6:                 21:                 36:                 51:
 7:                 22:                 37:                 52:
 8:                 23:                 38:                 53:
 9:                 24:                 39:                 54:
10:                 25:                 40:                 55:
11:                 26:                 41:                 56:
12:                 27:                 42:                 57:
13:                 28:                 43:                 58:
14:                 29:                 44:                 59:
15:                 30:                 45:                 60:
```

5.2.5. Add Phantom Extension

A phantom extension must be setup for every multimedia queue that is added on EMC. The phantom station below is setup for the **Webchat Sales** queue on EMC. Type, **add station x** where x is the phantom station number. This is added as type **6408D+, Port** is set to **X** and a suitable **Name** is given to the station, all other settings can be left as default.

```
add station 28901                                               Page   1 of   5
                                       STATION

Extension: 28901                          Lock Messages? n               BCC: 0
     Type: 6408D+                         Security Code:                  TN: 1
     Port: X                            Coverage Path 1:                 COR: 1
     Name: Webchat Sales Phantom        Coverage Path 2:                 COS: 1
                                        Hunt-to Station:
STATION OPTIONS
                                            Time of Day Lock Table:
              Loss Group: 2           Personalized Ringing Pattern: 1
             Data Module? n                     Message Lamp Ext: 28901
            Speakerphone: 2-way               Mute Button Enabled? y
        Display Language: english

          Survivable COR: internal              Media Complex Ext:
   Survivable Trunk Dest? y                          IP SoftPhone? n
                                               Remote Office Phone? n
                                                          IP Video? n
```

5.3. Save Avaya Aura® Communication Manager Configuration

From the Command Line, enter **Save Translation** to commit the changes that have been introduced to memory on Communication Manager.

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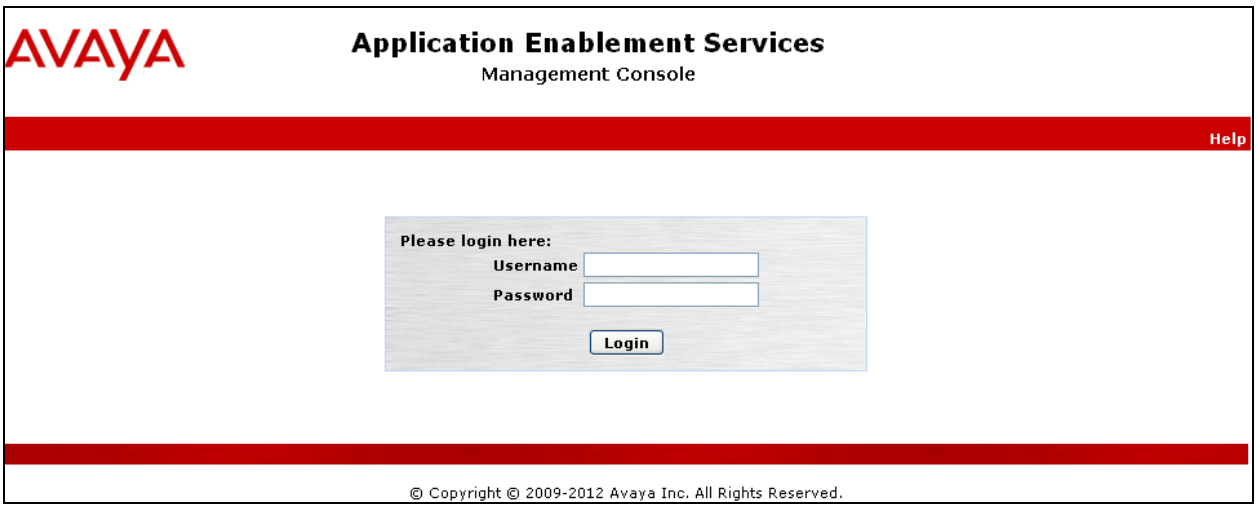
6. Configure Avaya Aura® Application Enablement Services Server

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

- Verify Licensing
- Create Switch Connection
- Administer TSAPI link
- Identify Tlinks
- Enable TSAPI & DMCC Ports
- Create CTI User
- Associate Devices with CTI User

6.1. Verify Licensing

To access the AES Management Console, enter **https://<ip-addr>** as the URL in an Internet browser, where <ip-addr> is the IP address of AES. At the login screen displayed, log in with the appropriate credentials and then select the **Login** button.



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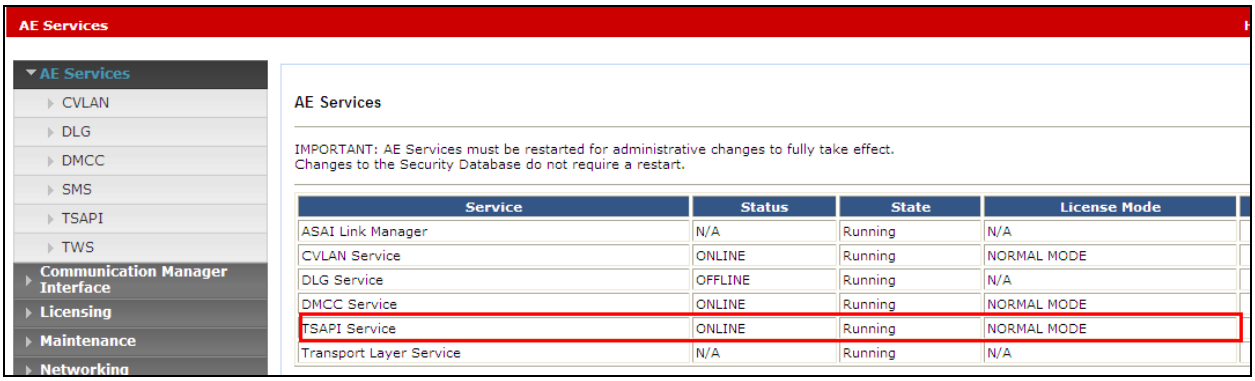
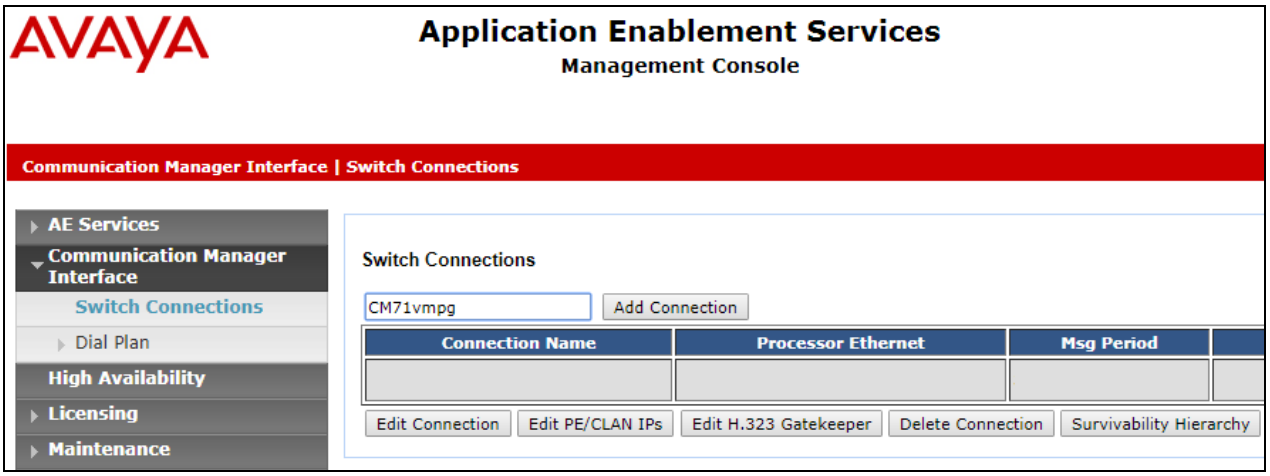
The Application Enablement Services Management Console appears displaying the **Welcome to OAM** screen (not shown). Select **AE Services** and verify that the TSAPI Service is licensed by ensuring that **TSAPI Service** is in the list of **Services** and that the **License Mode** is showing **NORMAL MODE**. If not, contact an Avaya support representative to acquire the proper license for your solution.



6.2. Create Switch Connection

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



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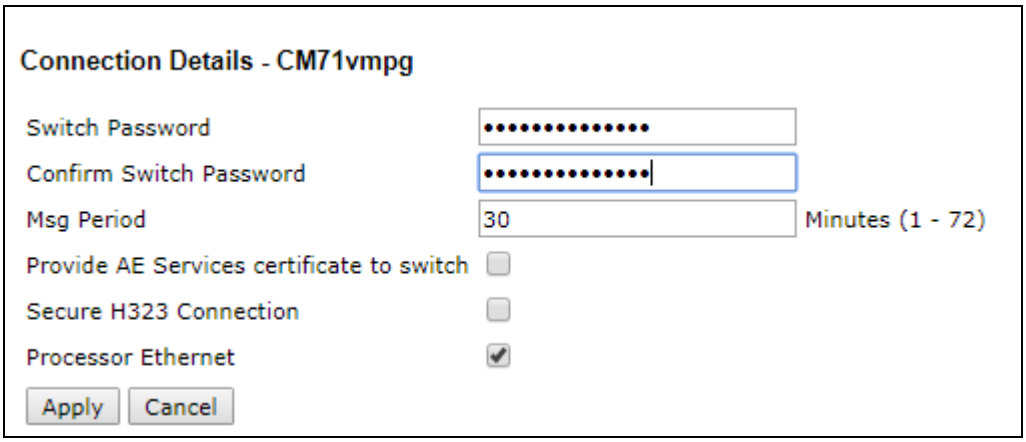
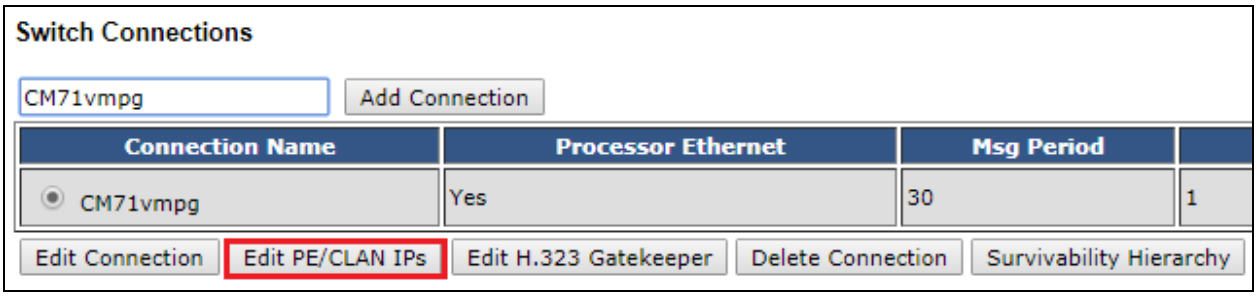
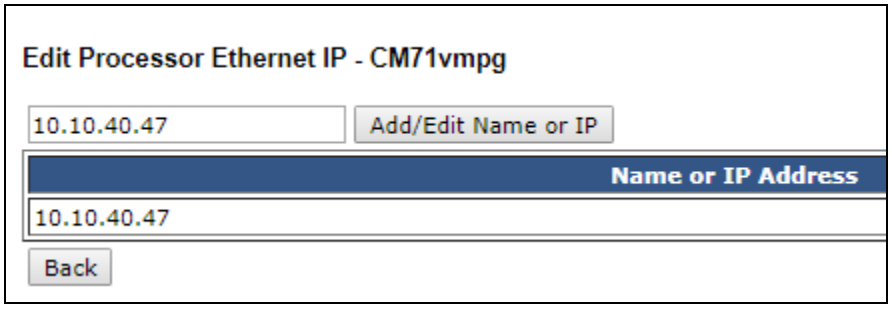
In the resulting screen, enter the **Switch Password**; the Switch Password must be the same as that entered into Communication Manager AE Services Administration screen via the **change ip-services** command, described in **Section 5.1.3**. The remaining fields were left as shown below. Click **Apply** to save changes.



From the **Switch Connections** screen, select the radio button for the recently added switch connection and select the **Edit PE/CLAN IPs** button.



In the resulting screen, enter the IP address of the **procr** as shown in **Section 5.1.2** that will be used for the AES connection and select the **Add Name or IP** button.



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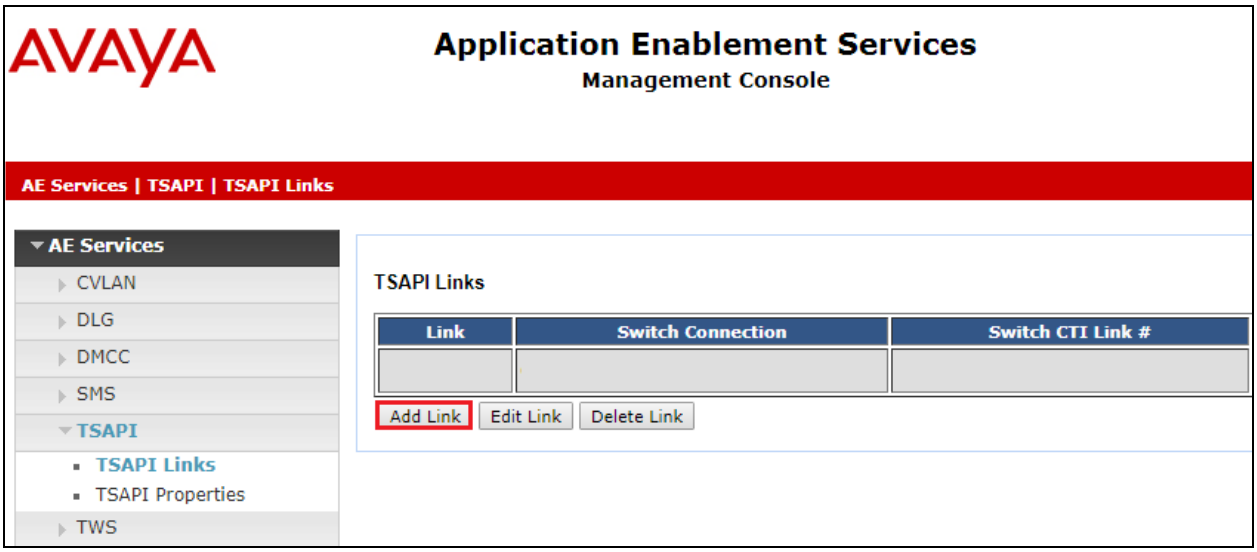
6.3. Administer TSAPI link

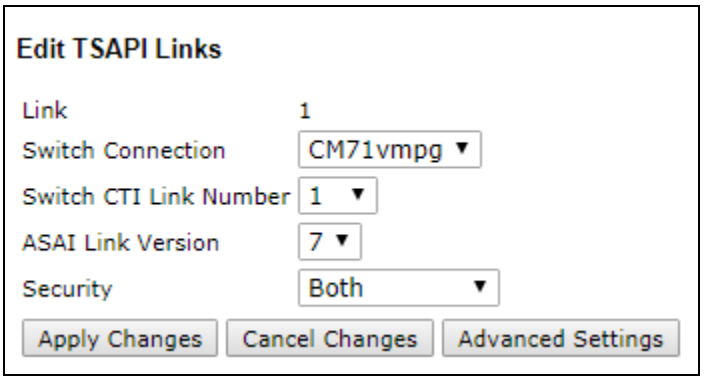
From the Application Enablement Services Management Console, select **AE Services → TSAPI → TSAPI Links**. Select **Add Link** button as shown in the screen below.



On the **Add TSAPI Links** screen (or the **Edit TSAPI Links** screen to edit a previously configured TSAPI Link as shown below), enter the following values:

- **Link:** Use the drop-down list to select an unused link number.
- **Switch Connection:** Choose the switch connection **CM71vmpg**, which has already been configured in **Section 6.2** from the drop-down list.
- **Switch CTI Link Number:** Corresponding CTI link number configured in **Section 5.1.4** which is **1**.
- **ASAI Link Version:** This can be left at the default value of **7**.
- **Security:** This was changed to **both** for compliance testing.

Once completed, select **Apply Changes**.



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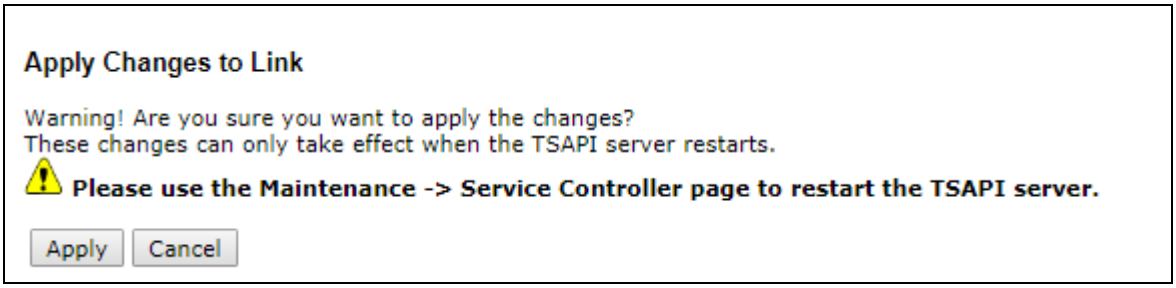
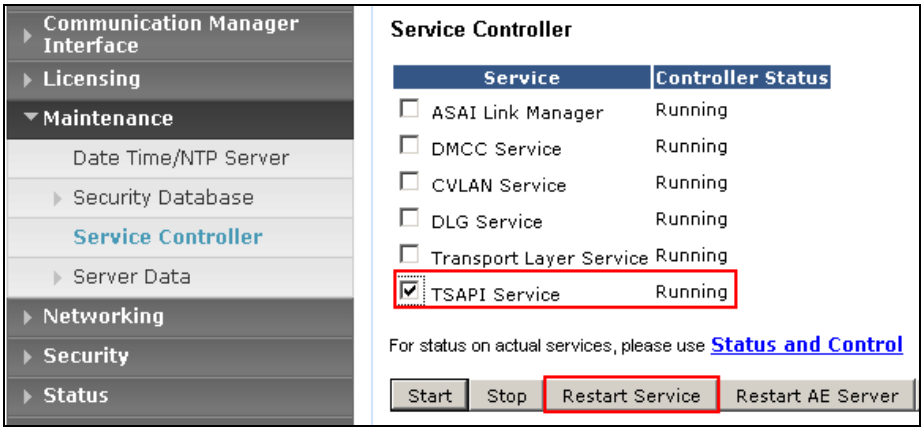
Another screen appears for confirmation of the changes made. Choose **Apply**.



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



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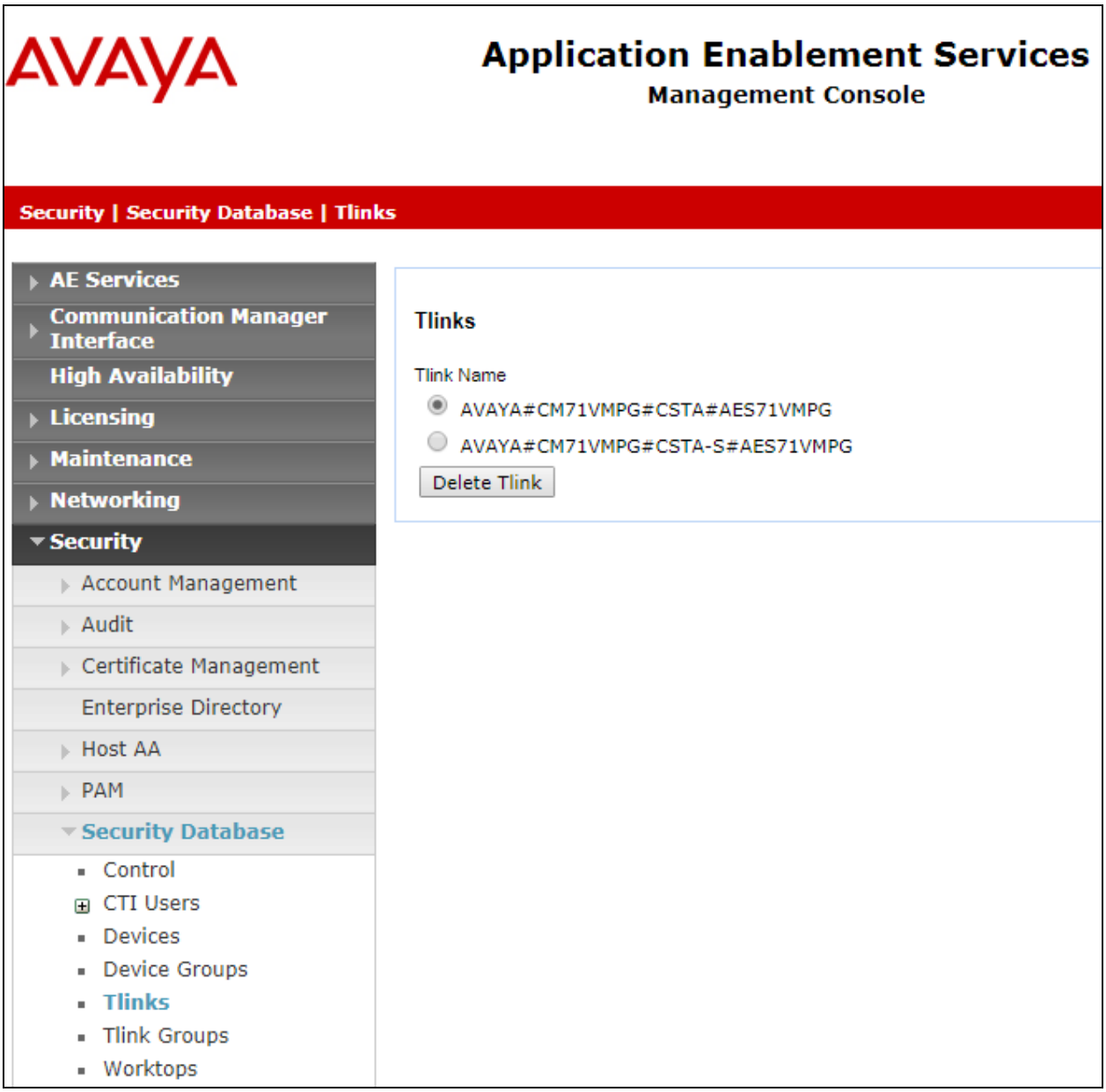
6.4. Identify Tlinks

Navigate to **Security → Security Database → Tlinks**. Verify the value of the **Tlink Name** for both.



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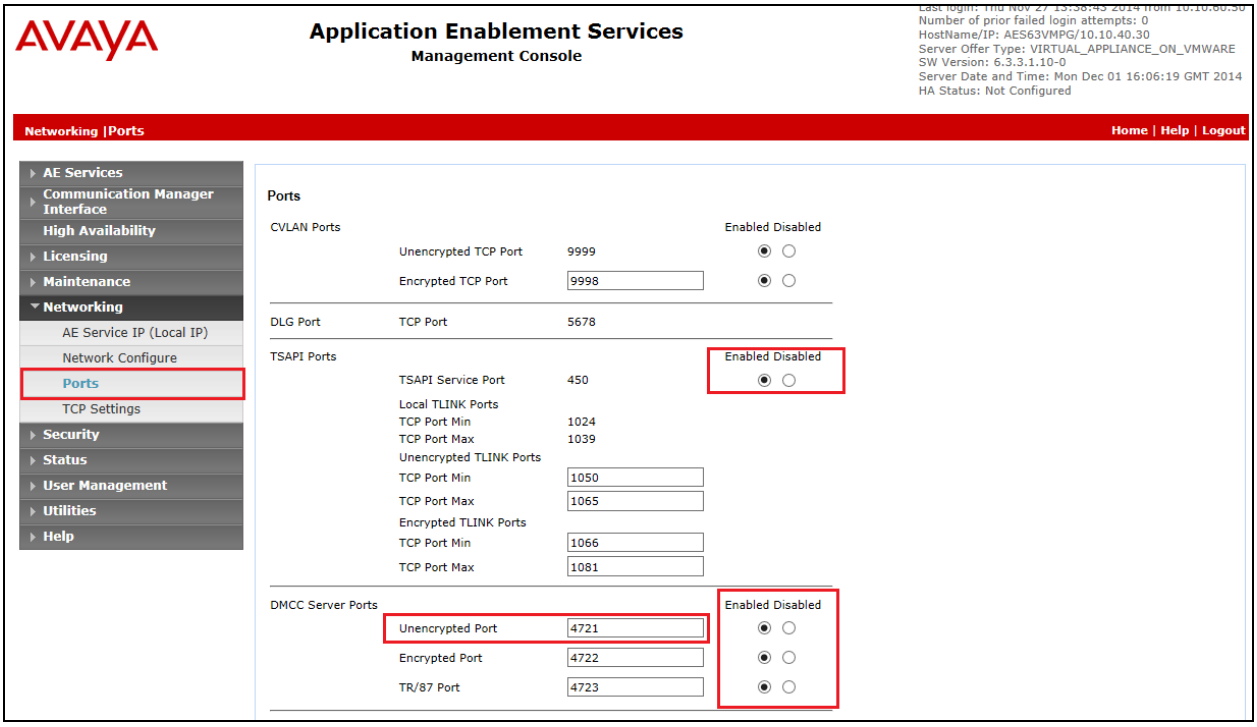
6.5. Enable TSAPI and DMCC Ports

To ensure that TSAPI and DMCC ports are enabled, navigate to **Networking → Ports**. Ensure that the TSAPI ports are set to **Enabled** as shown below. Ensure that the **DMCC Server Ports** are also **Enabled** and take note of the **Unencrypted Port 4721** which will be used later in **Section 7.1**. CCT ContactPro uses TSAPI functions, but it uses the TSAPI functions via a connection through the DMCC ports. This makes it possible not to install the TSAPI Client on the client computer.



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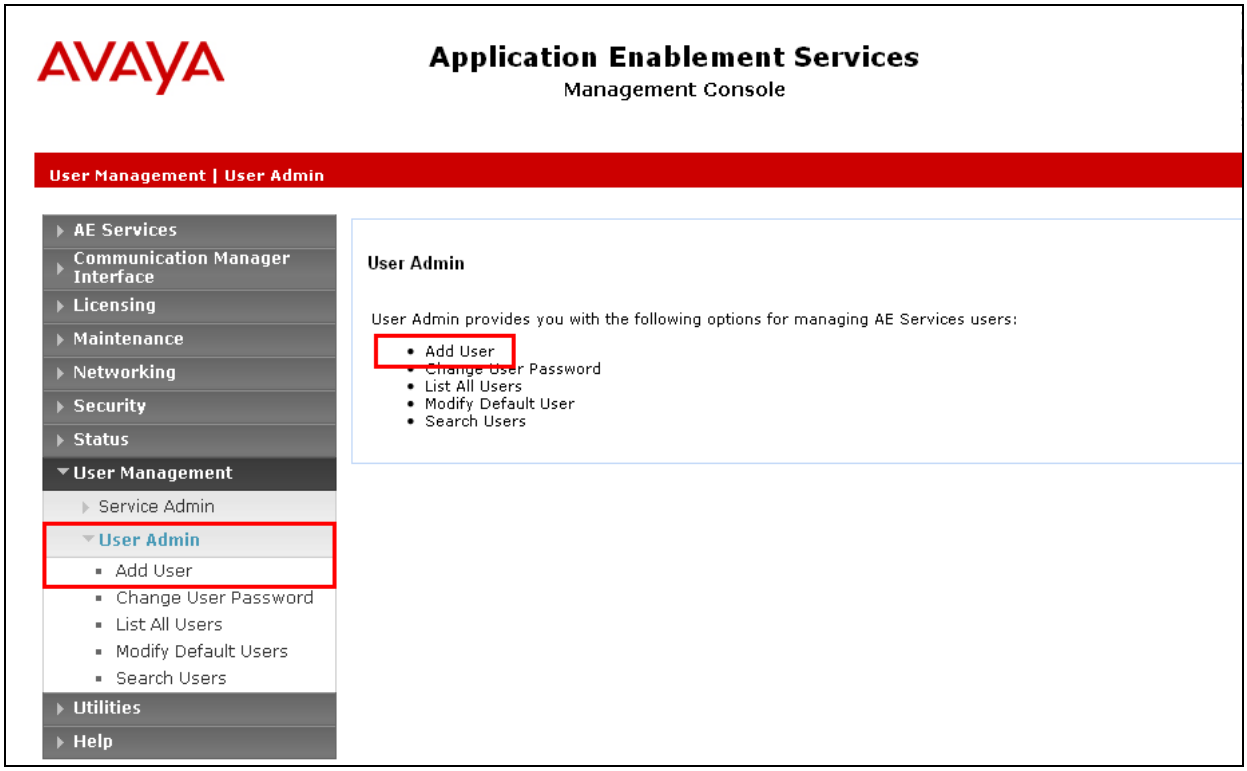
6.6. Create CTI User

A User ID and password needs to be configured for CCT ContactPro to communicate as a TSAPI client with the Application Enablement Services server. Navigate to the **User Management → User Admin** screen then choose the **Add User** option.



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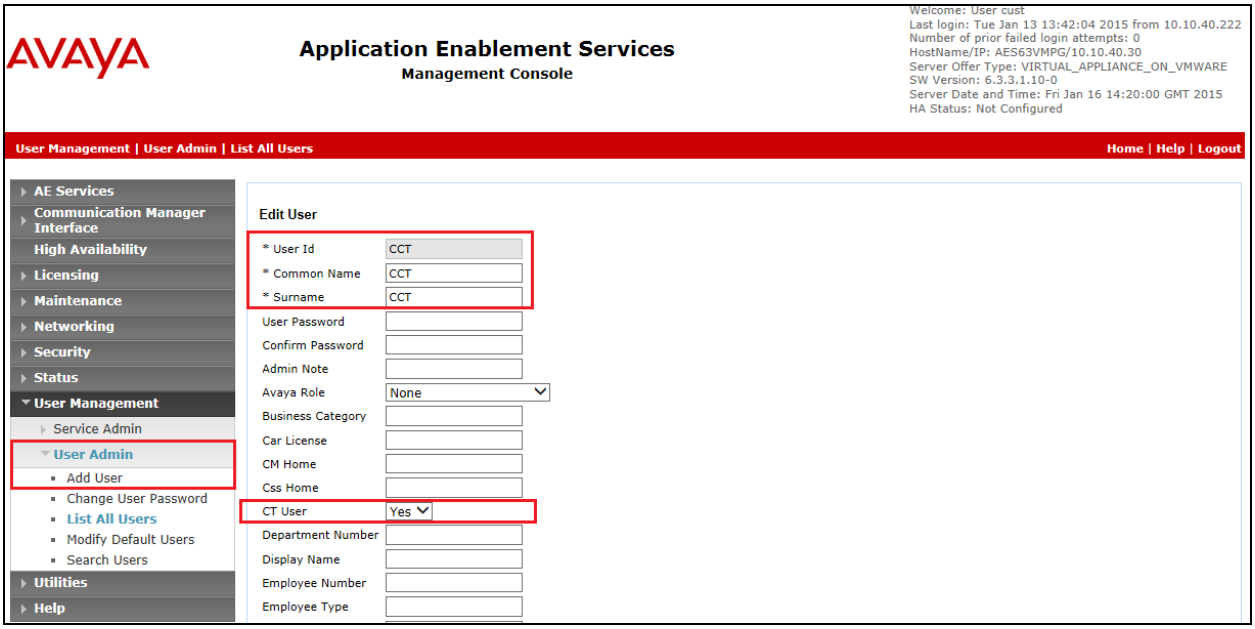
In the **Add User** screen shown below, enter the following values:

- **User Id** - This will be used by the CCT ContactPro setup in **Section 8.1**.
- **Common Name** and **Surname** - Descriptive names need to be entered.
- **User Password** and **Confirm Password** - This will be used with the **PrimaryAESLogin&Password** in **Section 8.1**.
- **CT User** - Select **Yes** from the drop-down menu.

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



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

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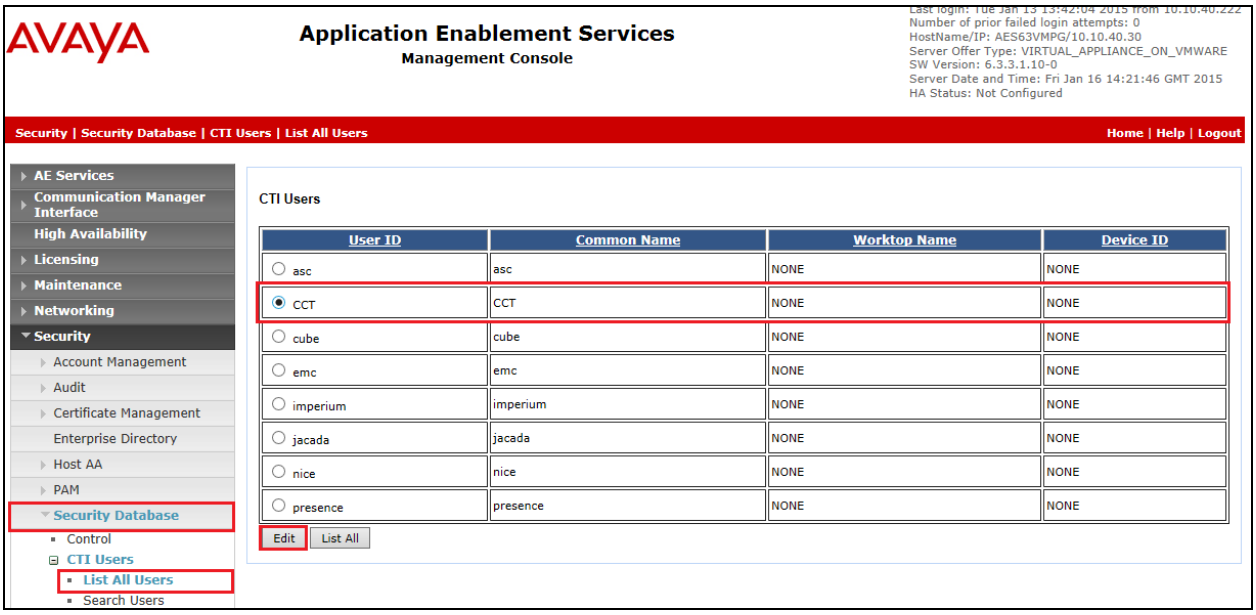
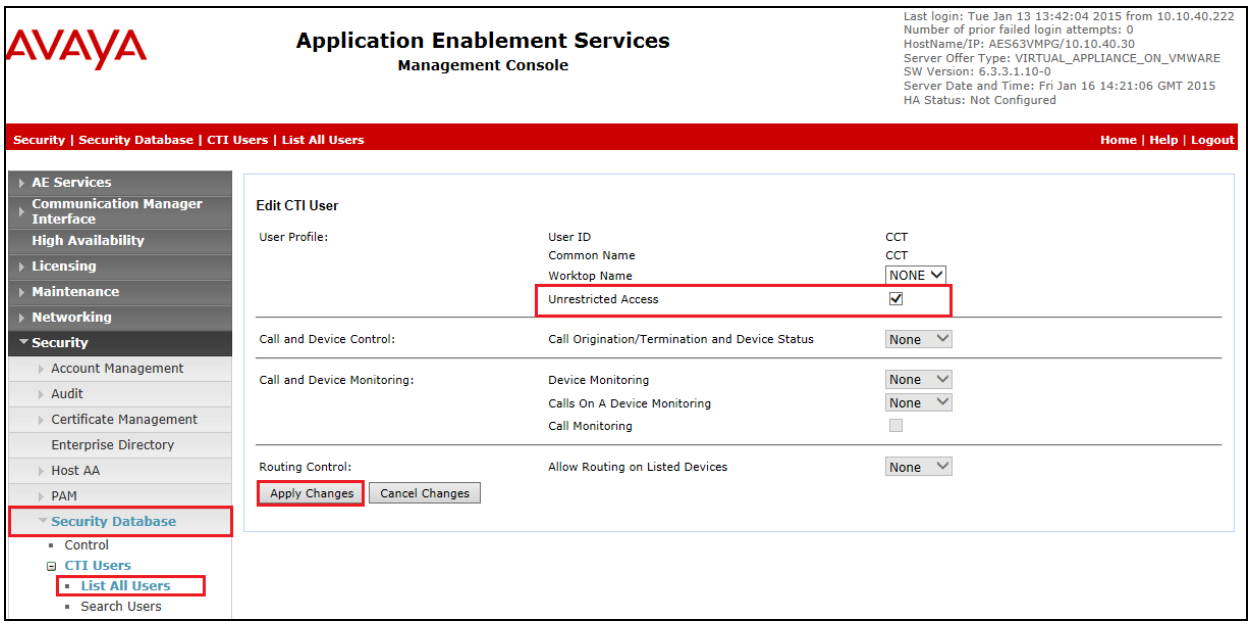
6.7. Change Security setting for CTI User

In the left window navigate to **Security → Security Database → CTI Users → List All Users**. From the main window, select the **CCT** user and click on **Edit**.



Tick the box **Unrestricted Access** to allow this user access to all devices on Communication Manager. If this is not required, then a list of devices to be allocated to this user will need to be set up and the procedure for achieving this can be found in the following document listed in **Section 11** *Avaya Aura® Application Enablement Services Administration and Maintenance Guide*. Click on **Apply Changes** to complete the setup.



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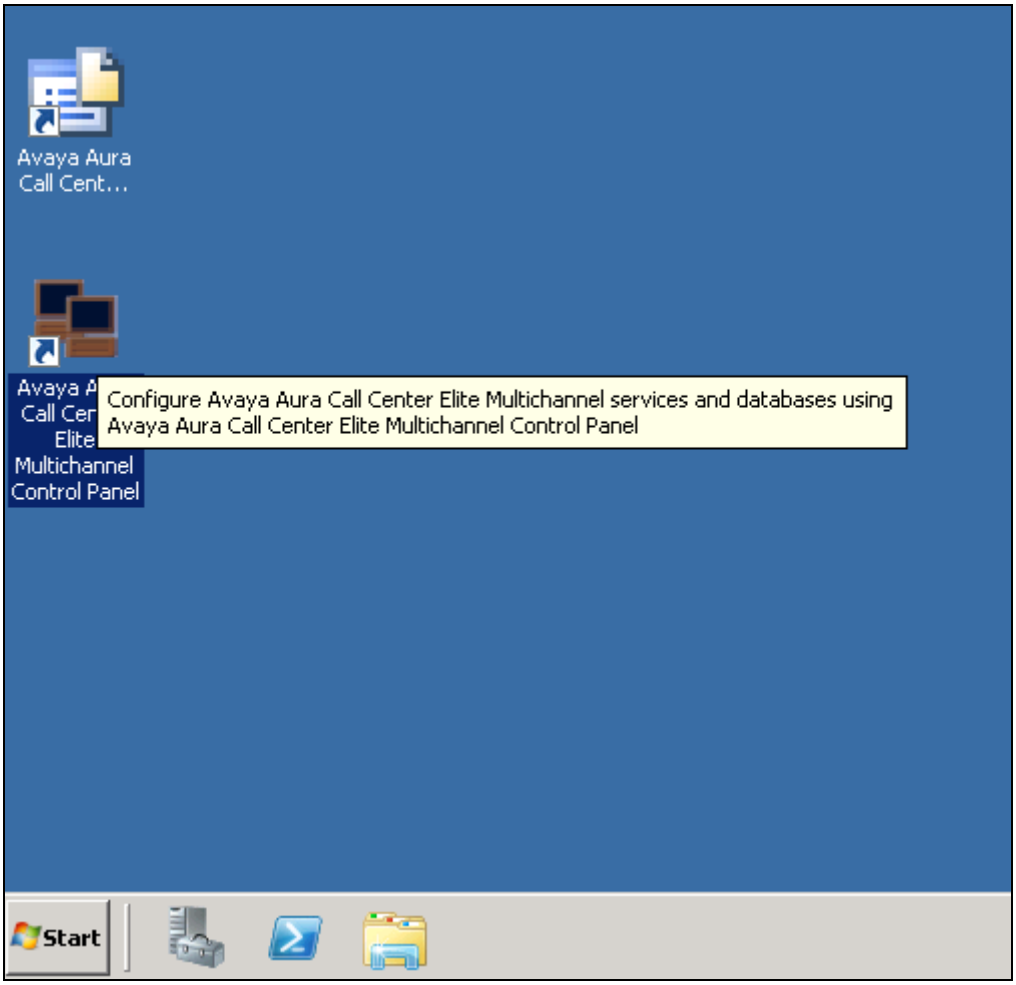
7. Configure the Avaya Elite Multichannel Control Panel

Open **Control Panel** to make changes to EMC.



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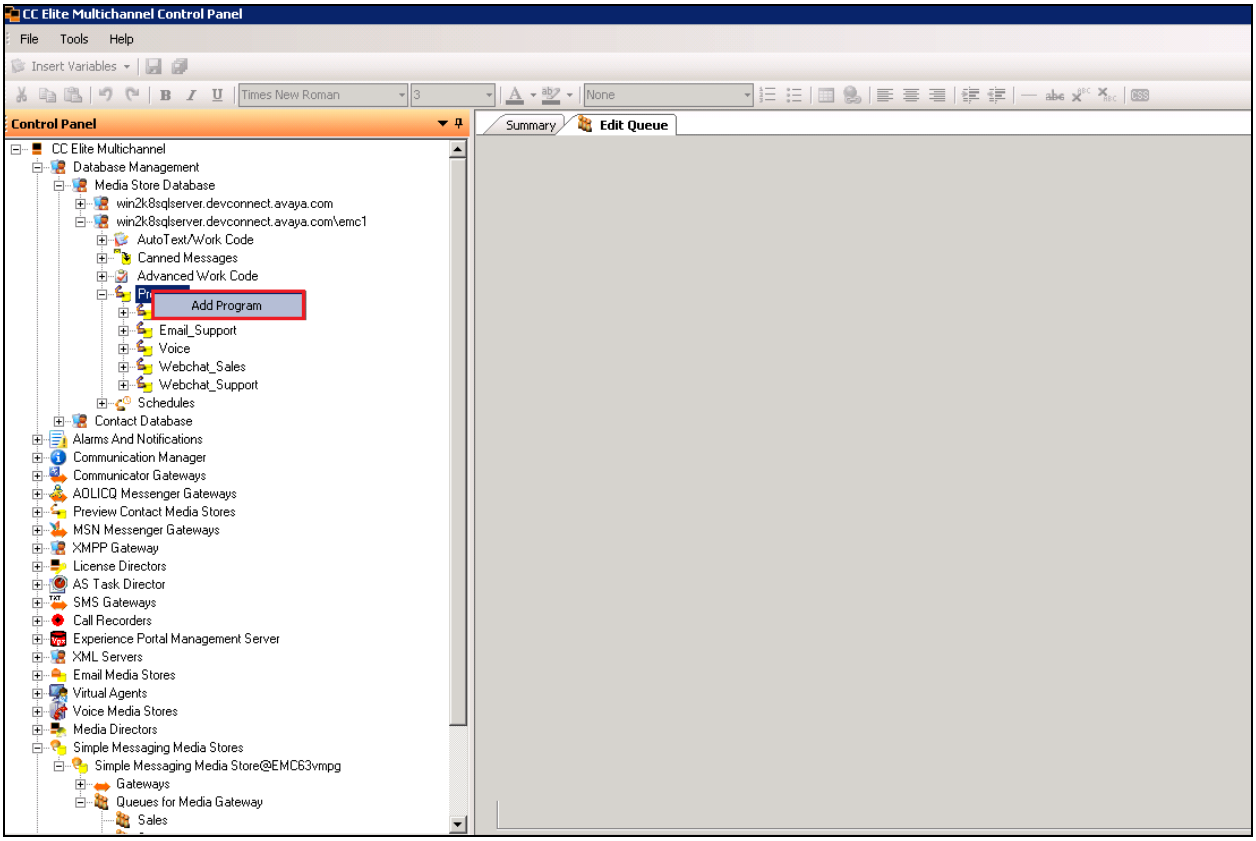
Changes are made to the various components in the left navigation window. Navigate to **Database Management → <SQL Server> → Programs**. Right-click on **Programs** and select **Add Program**.



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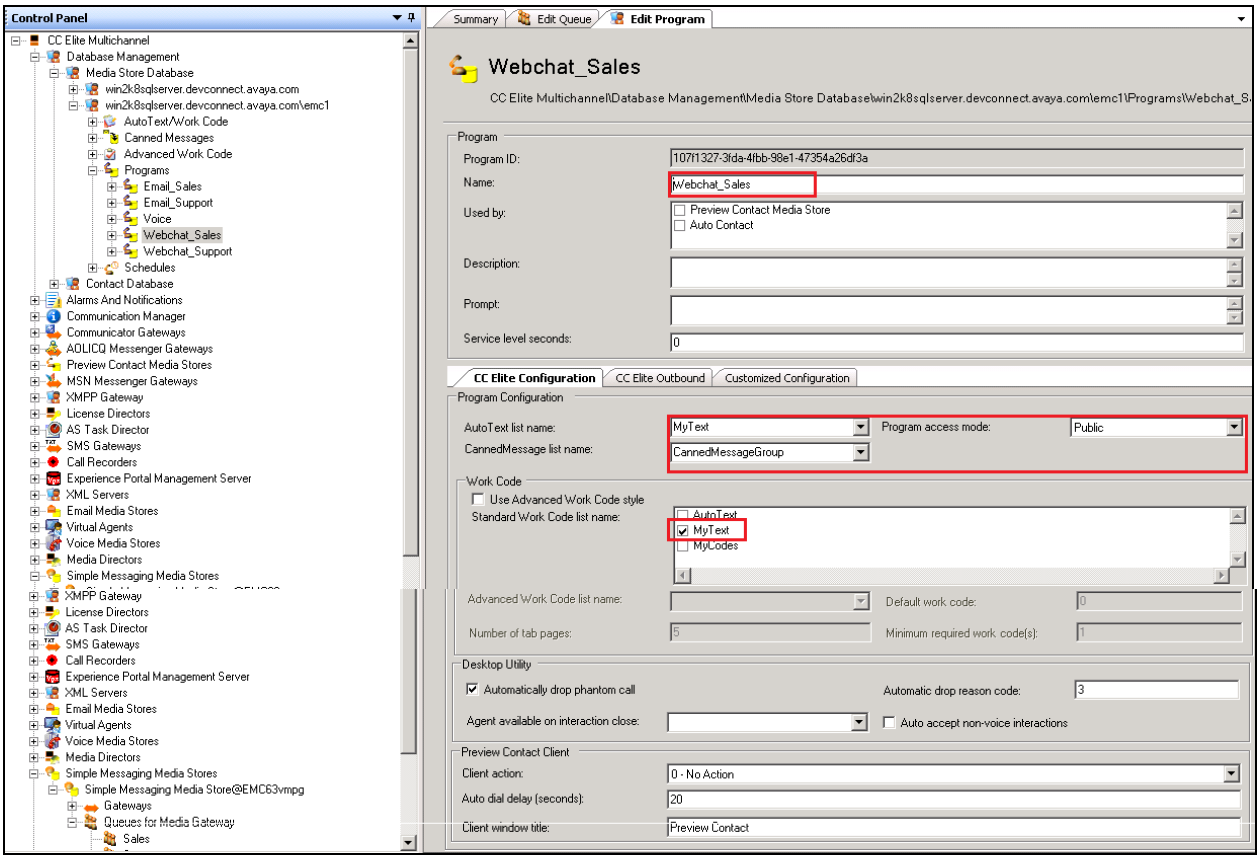
- Enter a suitable **Name**.
- In the Program Configuration panel, select **MyText** from the dropdown as the AutoText List Name.
- Define **Public** as the Program access mode.Select **MyText** as the **Work Code list name**.
- Tick **Automatically Drop Phantom Call**.
- Enter **3** as the Automatic Drop Reason Code.
- Leave the other configuration items with their default values.
- Confirm your selections, and save and close the Program window.



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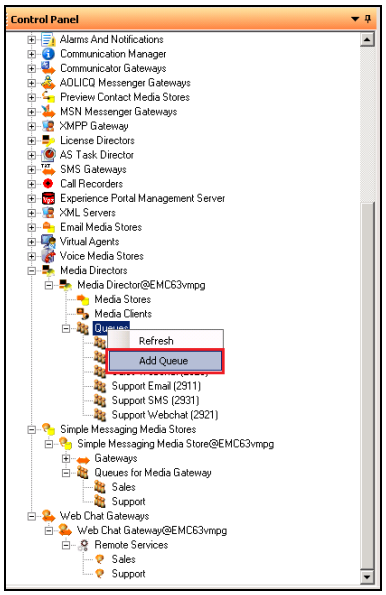
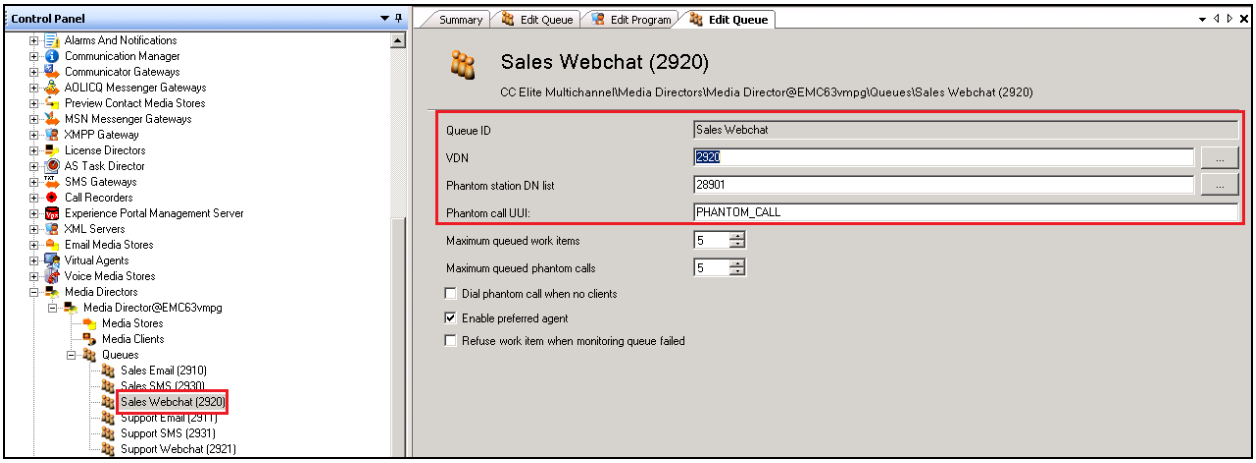
Navigate to **Media Directors → MediaDirector@EMC → Queues**. Right-click on Queues and select **Add Queue**.



Assign the VDN created in **Section 5.2.1** and the phantom extension created in **Section 5.2.5** to the queue.



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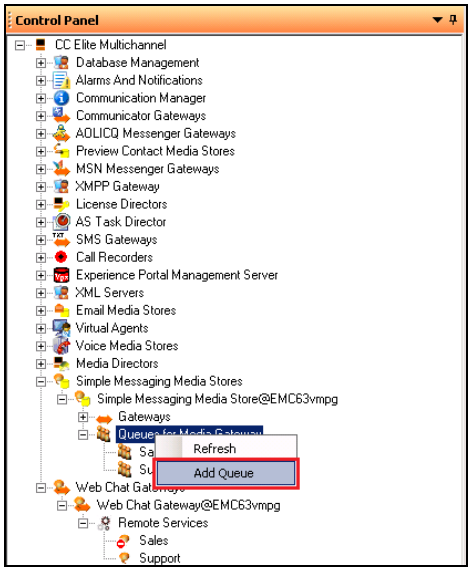
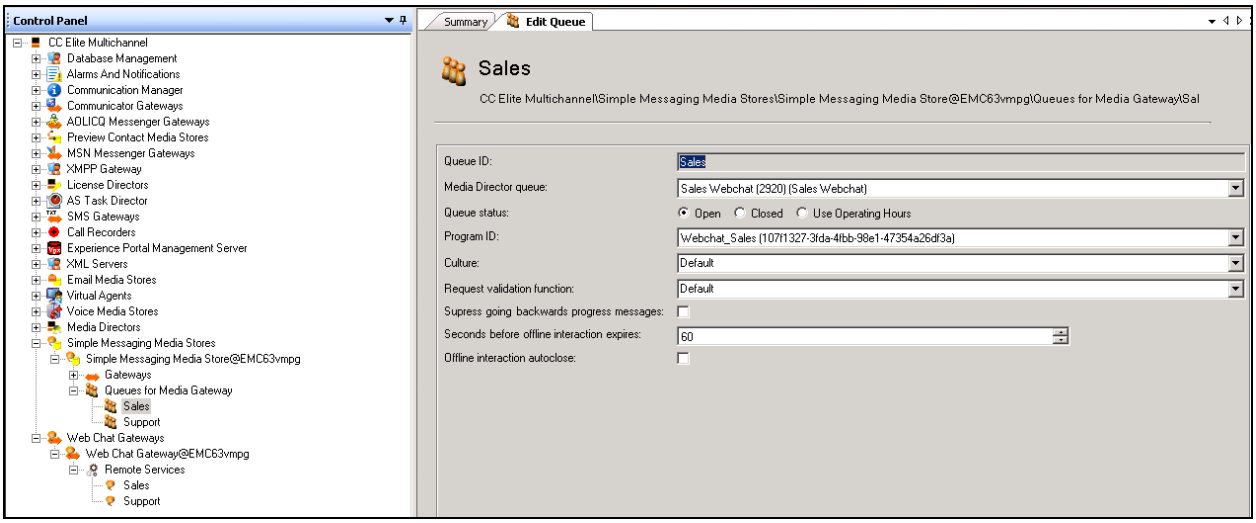
Navigate to **Simple Messaging Media Stores → Simple Messaging Media Stores@ <EMCServer> → Queues for Media Gateways**. Right-click on Queues for Media Gateways and select **Add Queue**.



Enter a suitable name and assign the **Media Director queue** and the **Program ID** create above. Everything else can be left as default. Save and close once all is done (not shown).



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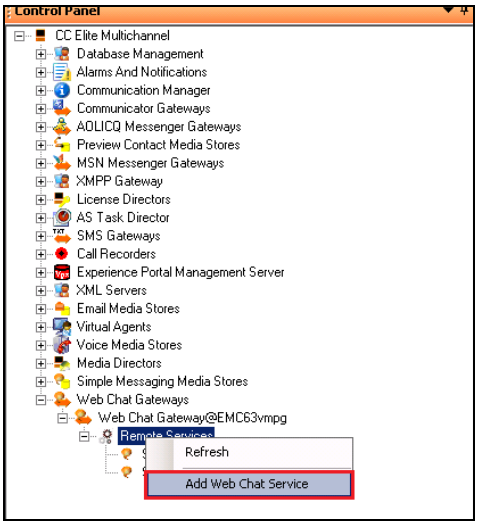
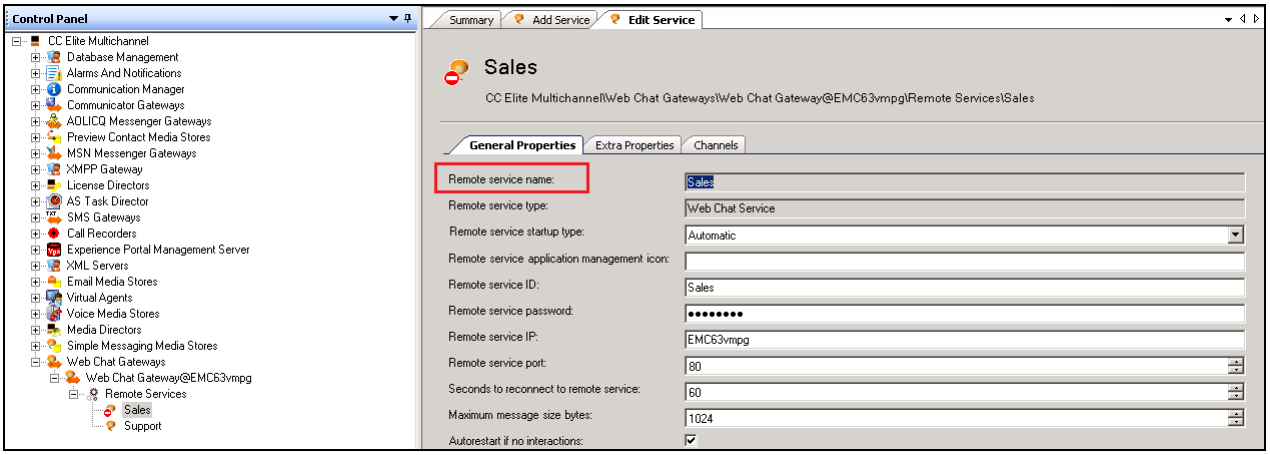
Navigate to **Web Chat Gateways → Web Chat Gateways@ <EMC Server> → Remote Services**. Right-click on Remote Services and select **Add Web Chat Service**.



Enter the **Remote service name**.



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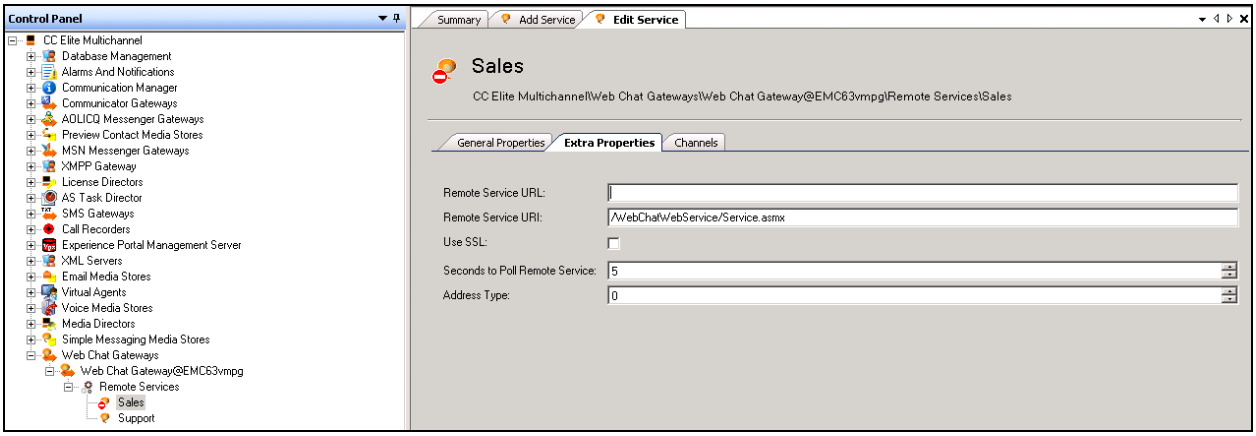
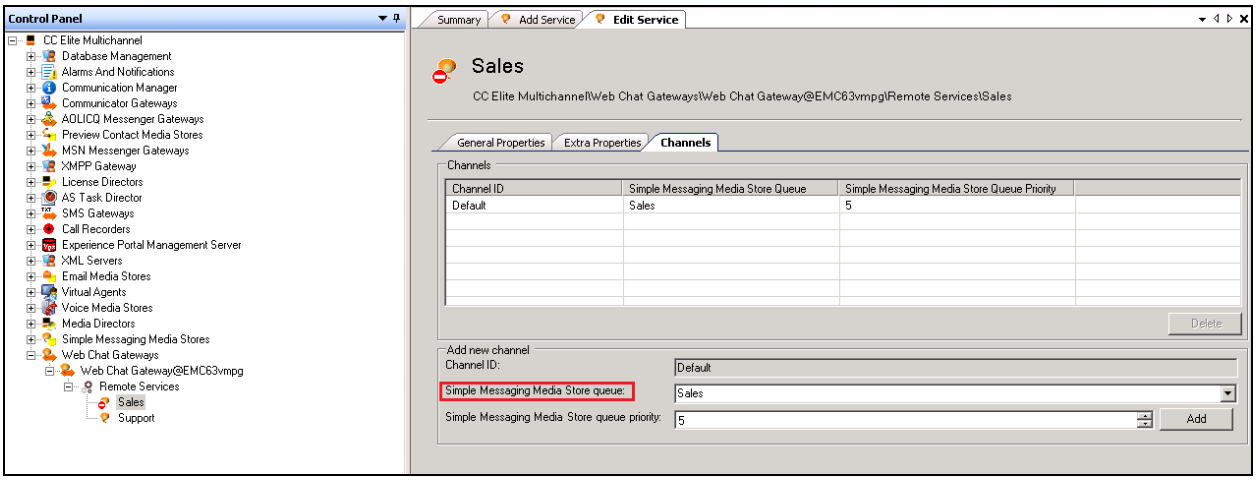
Leave the fields in the **Extra Properties** tab as default.



Assign the correct **Simple Messaging Media Store queue**.



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8. Configure CCT ContactPro

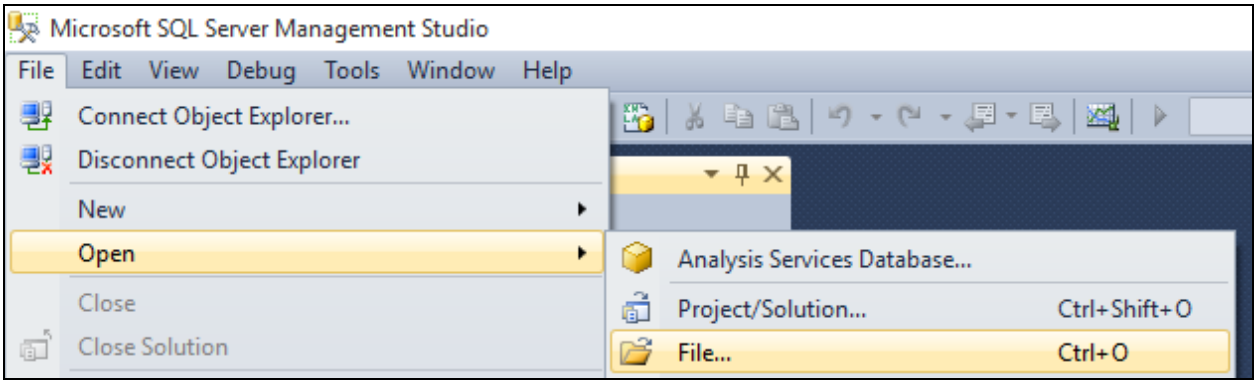
This section outlines the steps required to configure the connections from CCT ContactPro to both the AES and EMC.

8.1. Create CCT ContactPro Database and User

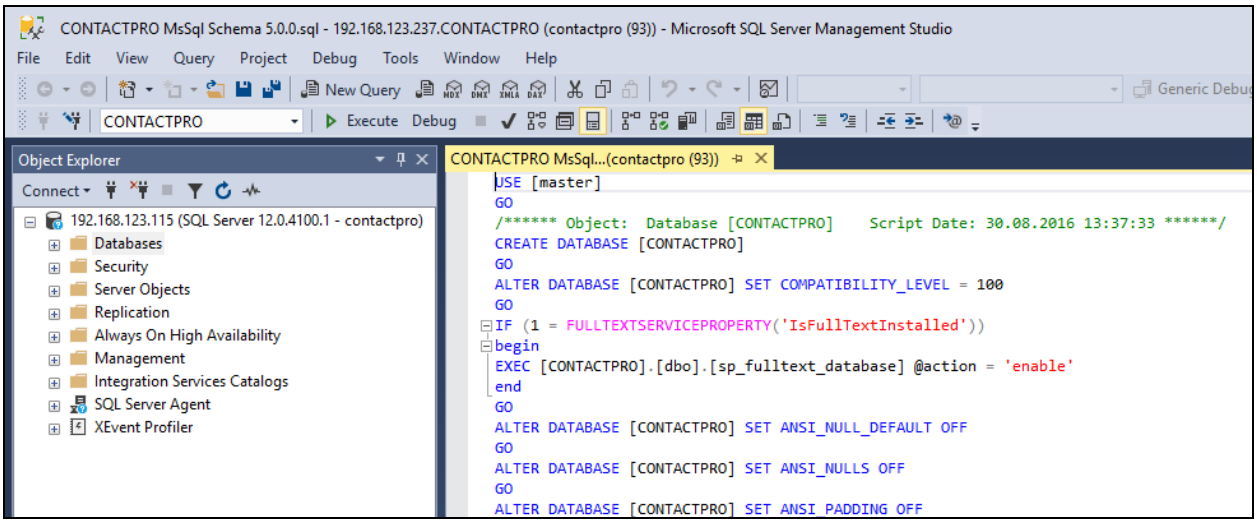
A database and database user for CCT ContactPro must be created on an SQL server. If EMC is being used with the solution the same database that is used by EMC can be used by CCT ContactPro.

8.1.1. Create Database

To create the CONTACTPRO database, open the provided **CONTACTPRO MsSql Schema.sql** script.



Execute the script by clicking the **Execute** button.



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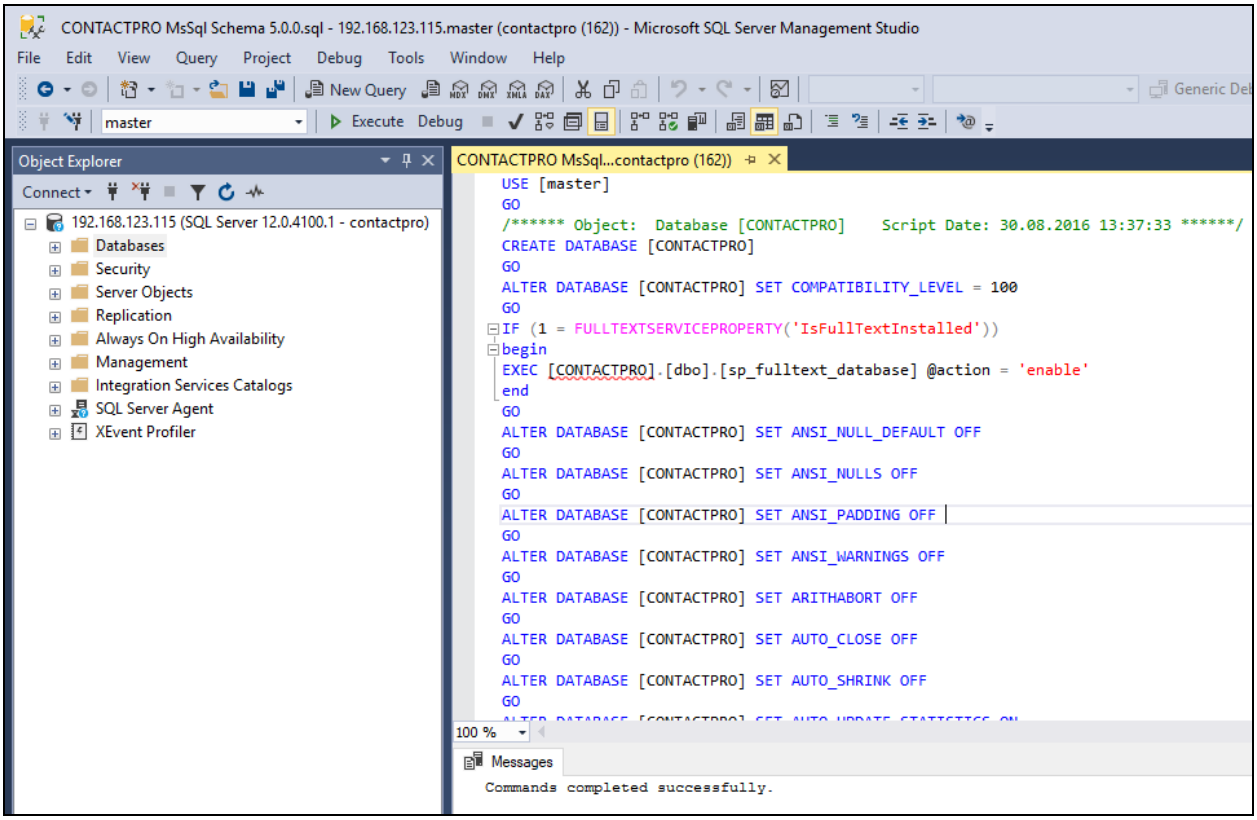
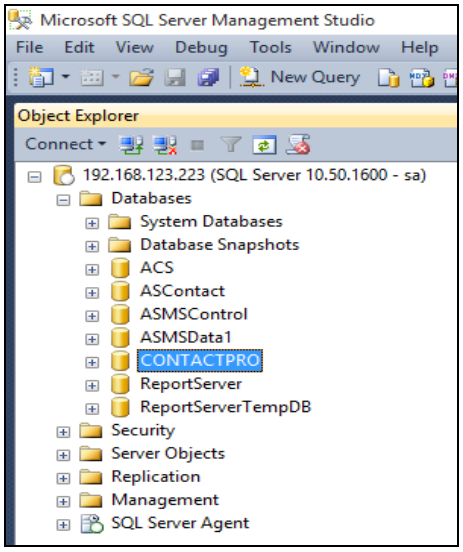
The following shows the script was successfully executed to create the database.



The end result will be as shown in the screenshot below, where there are 4 standard Avaya EMC databases (**ACS**, **ASContact**, **ASMSControl**, **ASMSData1**) and the **CONTACTPRO** database which was just created. The default MS SQL **ReportServer** and **ReportServerTempDB** databases may also be present.



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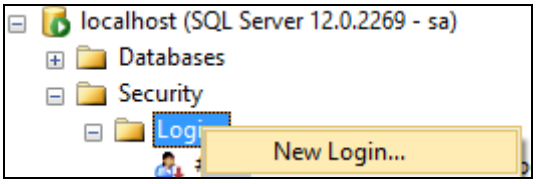
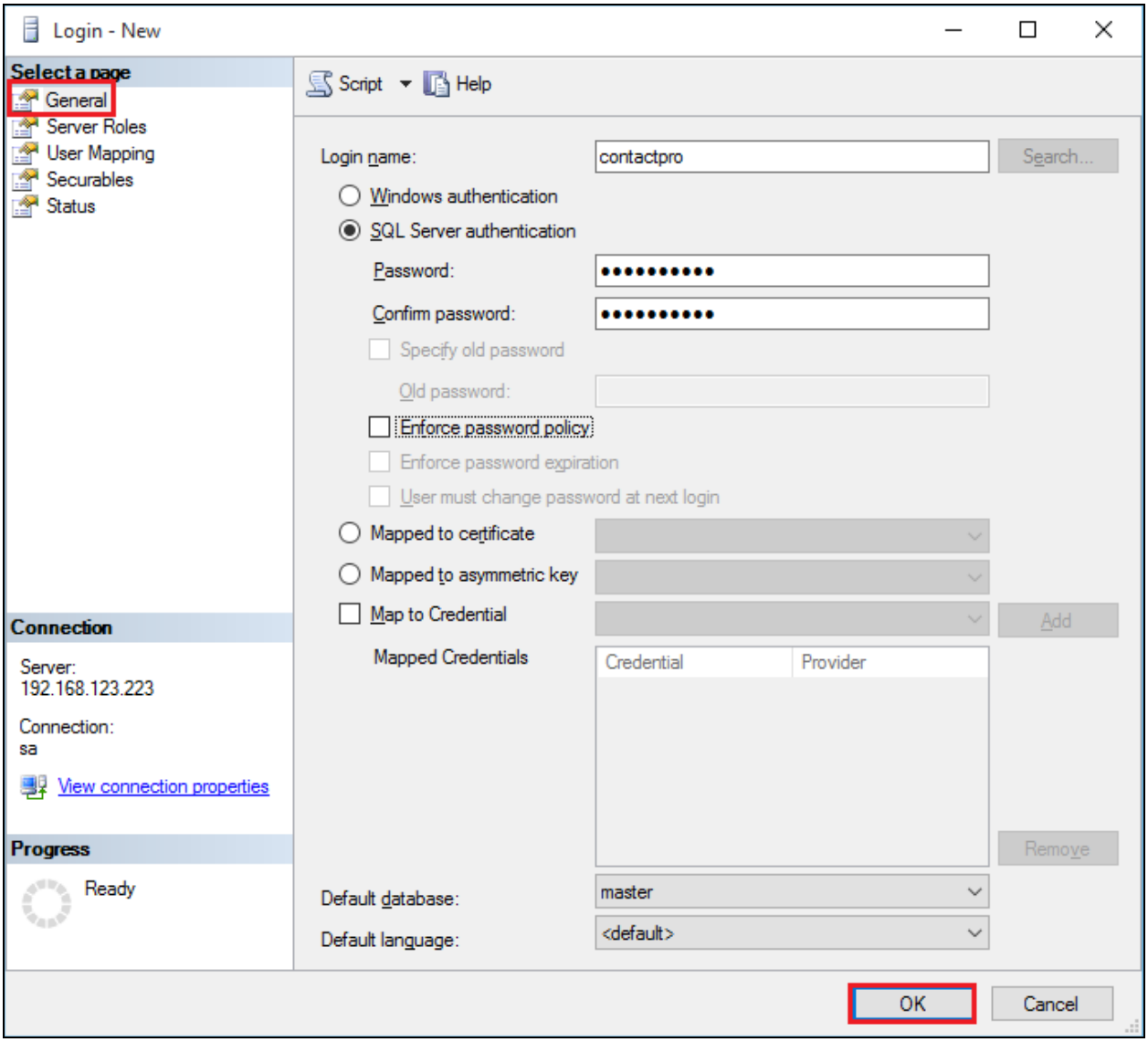
8.1.2. Create User

Create a database user named **contactpro**. Right-click on **Login** and click on **New Login**.



Click on the **General** tab in the left window and enter the **Login name** and click on **SQL Server authentication** and enter a suitable **Password** for the **contactpro** user. Click on **OK** at the bottom of the screen once done.



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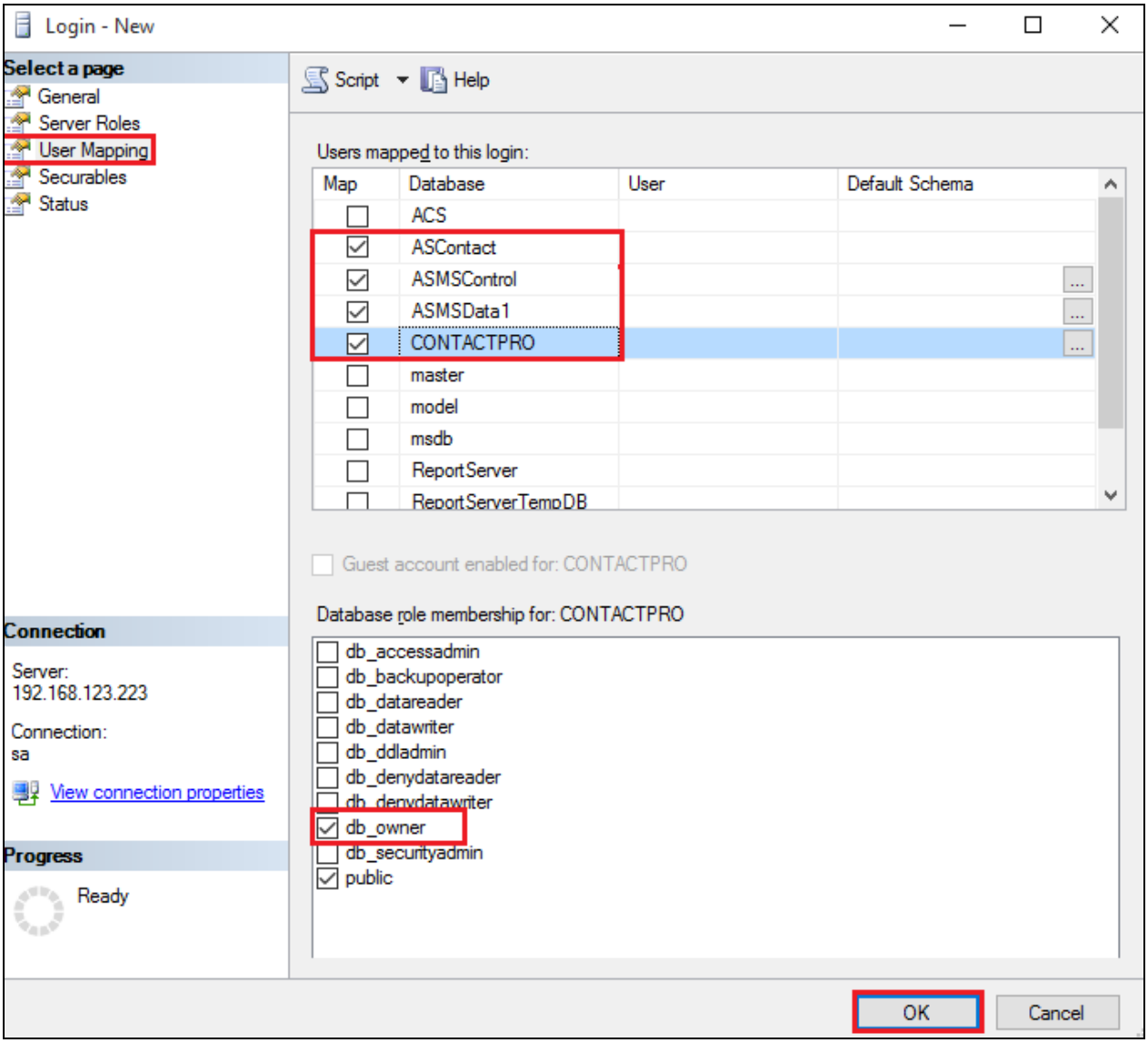
Click on **User Mapping** in the left window. For this user, grant public and **db_owner** access to **ASContac**t, **ASMSControl**, **ASMSData1** and **CONTACTPRO** databases. Click on **OK** at the bottom of the page once done.



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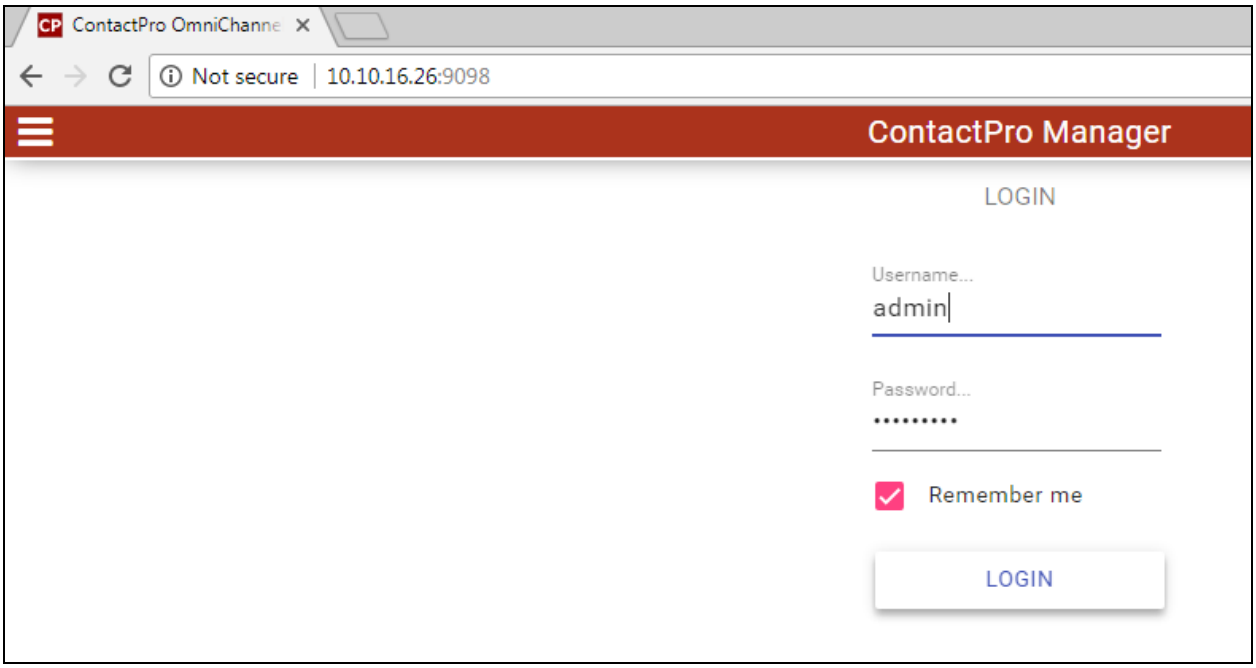
8.2. Configure Properties with ContactPro Manager

The ContactPro Manager allows the configuration of properties for all CCT ContactPro Clients. Global properties can be set at the **Top System Level** or set different properties at the **Tenant level** or **Workgroup level** or for each **individual Agent**.

Properties only need to be configured in sub levels if different Properties for other Tenants are required. This is well suited for Enterprise deployment and is similar to Avaya Interaction Center IC Manager.

The following sections describe the minimum required properties to configure for CCT ContactPro in order to connect successfully to both the AES and the EMC server. All other properties may be left at their default values.

Log in to **ContactPro Manager** via a web session as shown below.



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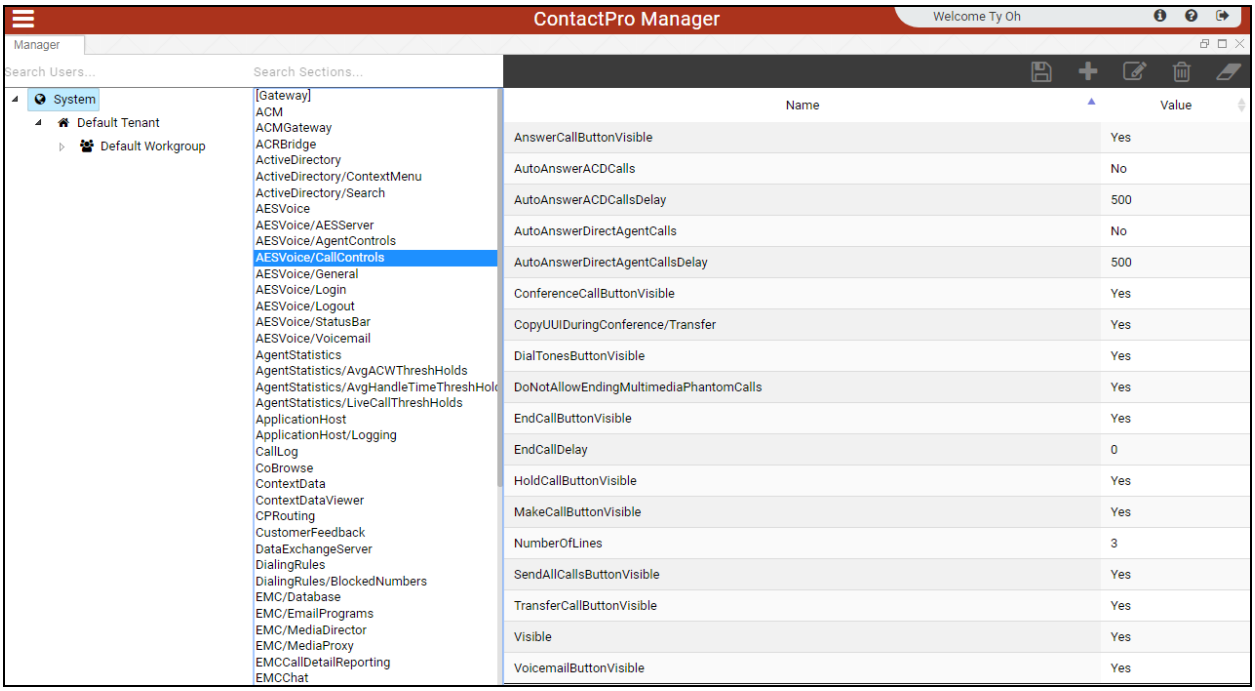
8.2.1. Configure the Connection to Avaya Aura® Application Enablement Services

Log into **ContactPro Manager** via a web session as shown on the previous page. The **ContactPro Manager** is opened and select **AESVoice/CallControls** from the left window. The main window shows the setup used for compliance testing.



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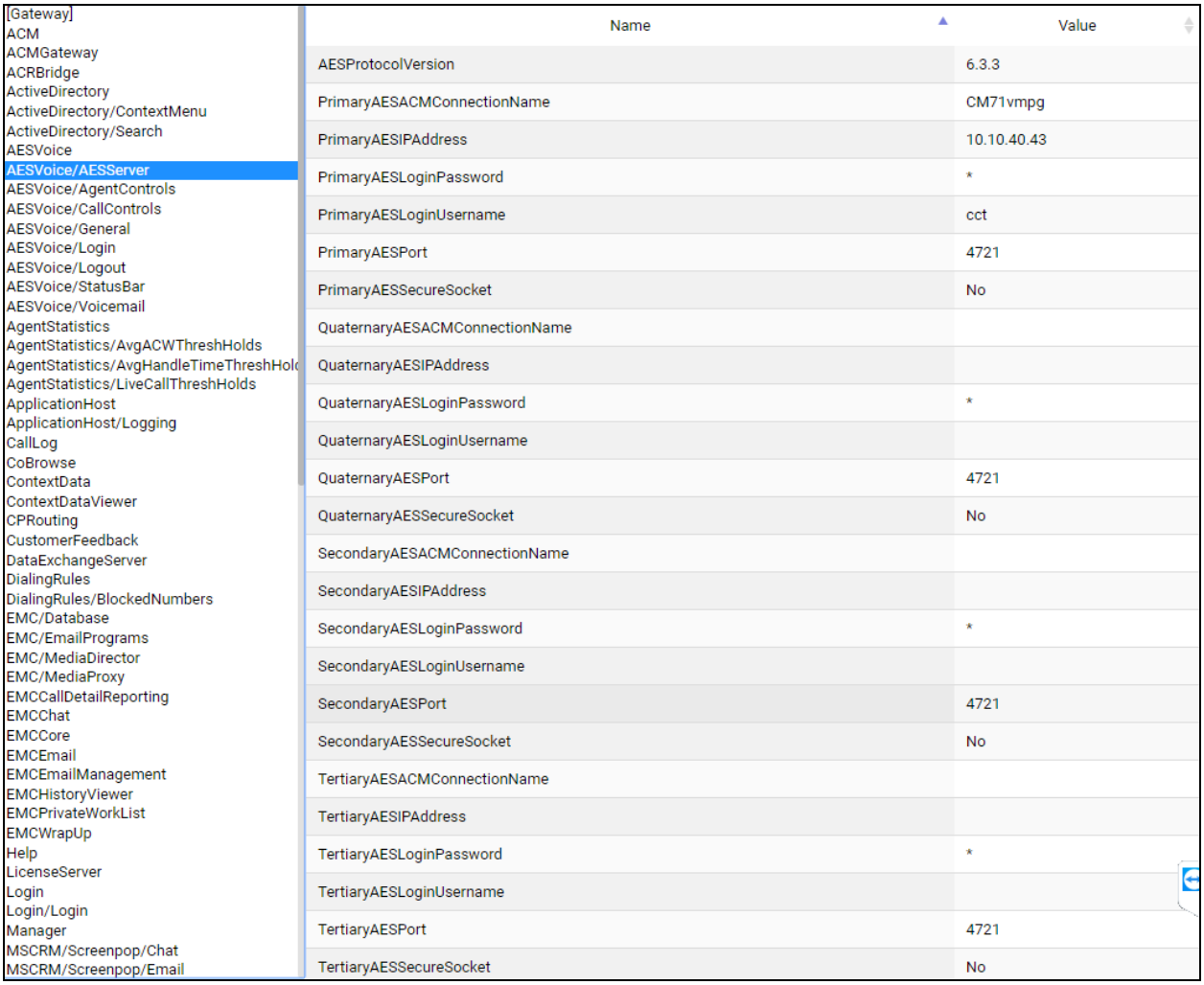
Click on **AESVoice/AESServer** in the left window. Information on the AES server can be filled in the main window; this information is all obtained from **Section 6** and is all required to connect successfully to the AES. Each field can be changed by double-clicking on the field.



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To change the Primary AES IP Address, double-click on the **PrimaryAESIPAddress** field highlighted below and this brings up an edit window where a new IP address can be entered and click **UPDATE** once this is done.

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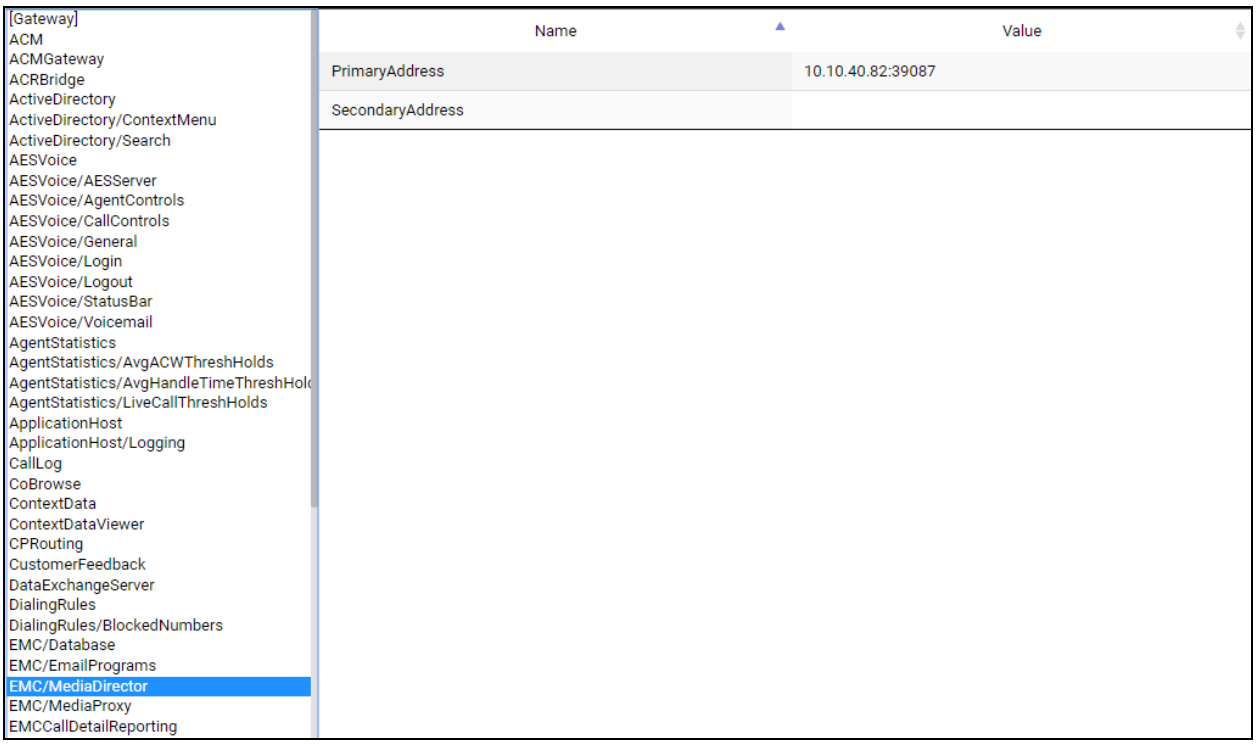
8.2.2. Configure the Connection to Avaya Aura® Call Center Elite Multichannel

Select **EMC/MediaDirector** from the left window and double-click on **PrimaryAddress** highlighted below and enter the IP address of the EMC server followed by the port used to connect, note that **39087** is the default secure port but this information can be obtained from the EMC server. Click on **OK** once this is entered correctly.

Note: The default port for the Secure Channel of EMC Media Director is 39087, otherwise it would be 29087. **EMCCore**, **EnableSecureChannel** property needs to be set to **Yes** (not shown).



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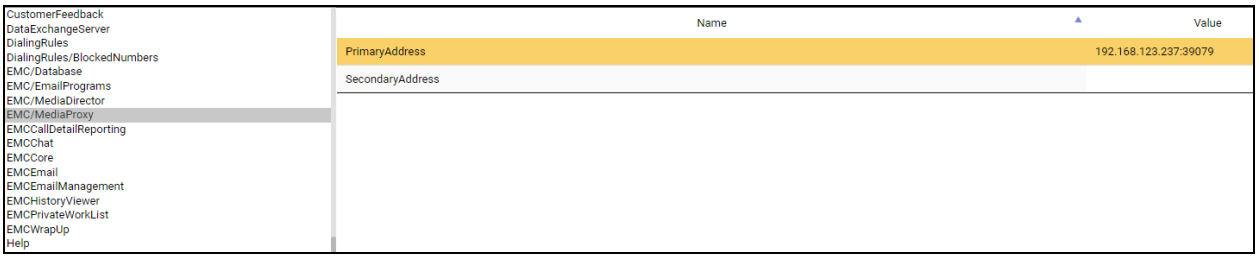
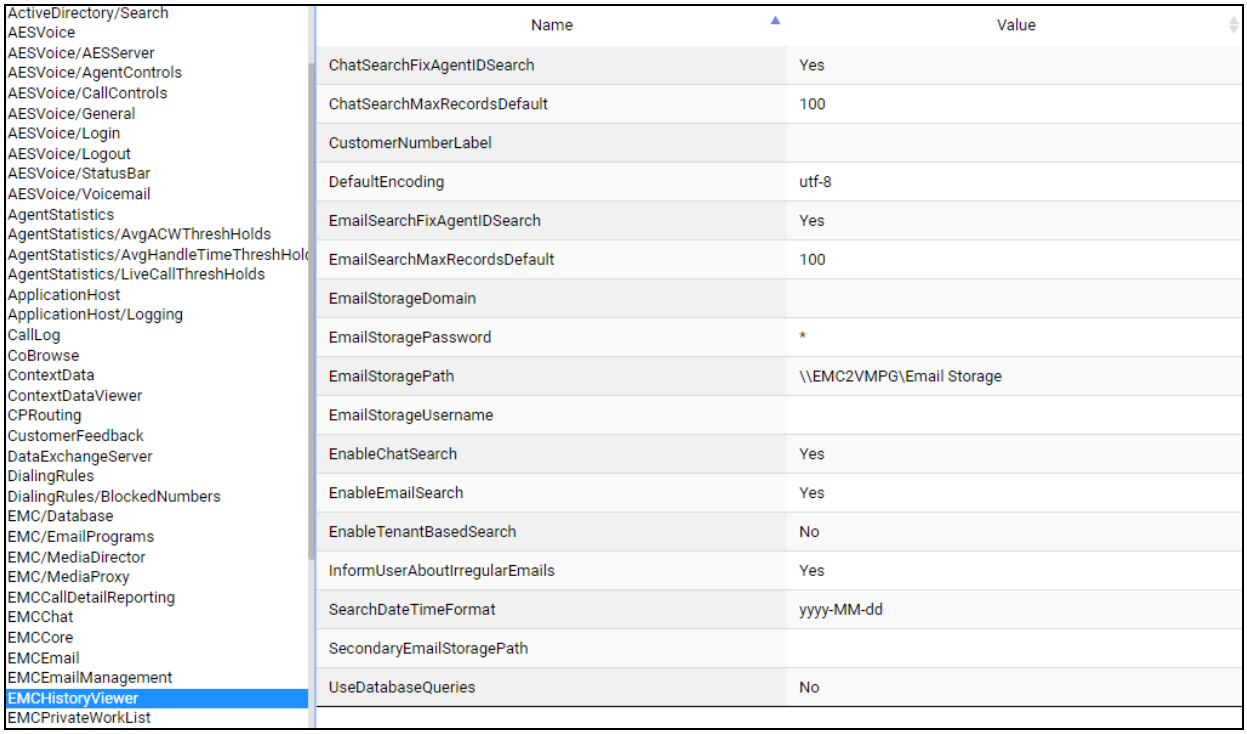
Select **EMC/MediaProxy** from the left window and double-click on **PrimaryAddress** highlighted below and enter the IP address of the EMC MediaProxy followed by the port used to connect, note that **39079** is the default secure port but this information can be obtained from the EMC setup. Click on **OK** once this is entered correctly.

Note: A connection can be made to a local EMC MediaProxy Service, or an EMC MediaProxy Service running on the Server. Both options are supported by EMC. The default port for the Secure Channel of EMC Media Proxy is 39079, otherwise it would be 29079. **EMCCore** and **EnableSecureChannel** property also need to be set to **Yes** (not shown).



8.2.3. Configure the Connection to EMC Email Storage Path

Select **EMCHistoryViewer** from the left window and double-click on the **EmailStoragePath** field and enter the path to where the EMC stores the emails. This can be found on the EMC server. Click on **OK** once this is complete.



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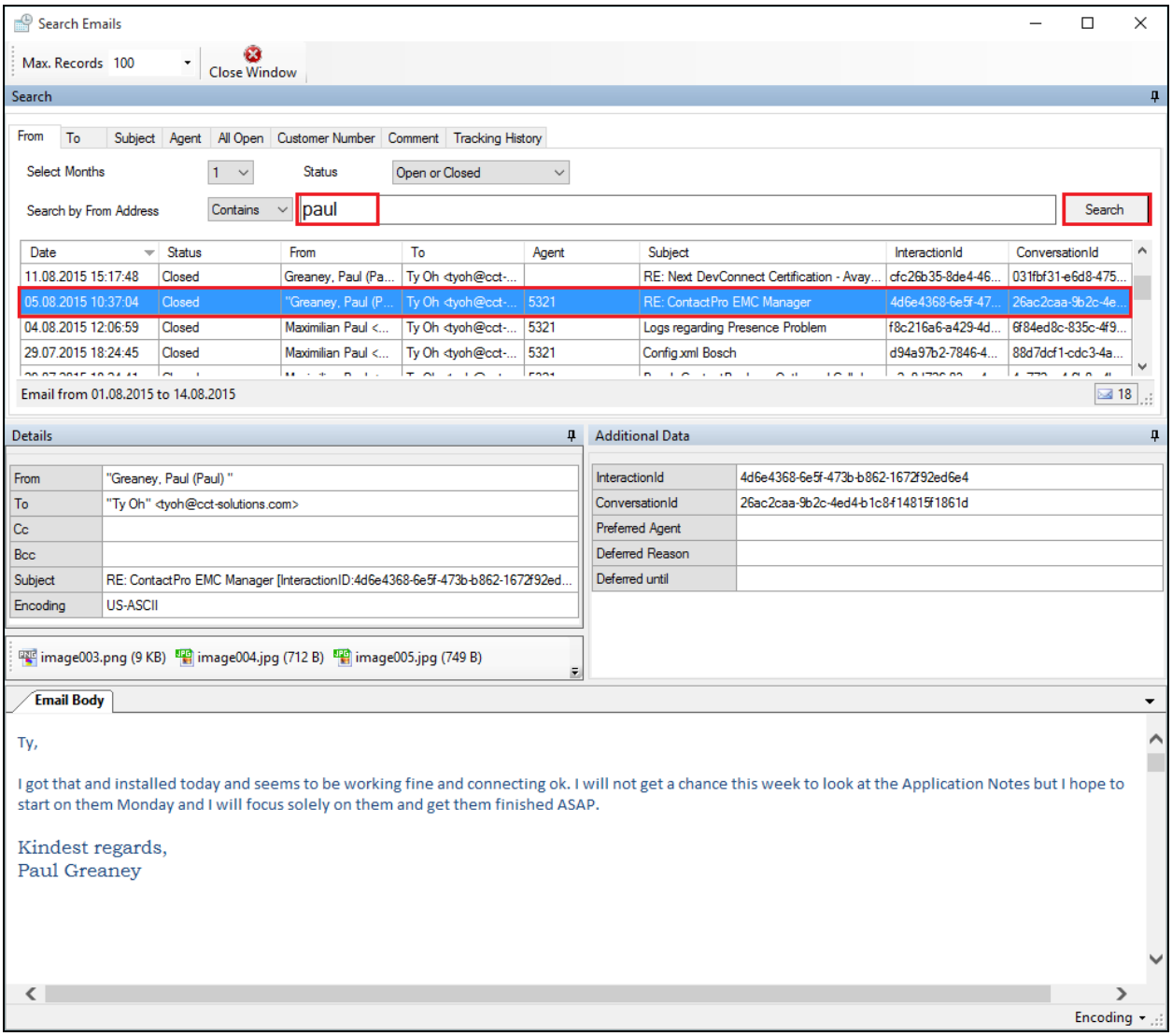
A shared path to the **Email Storage** must be created for clients to access. This is typically in the "C:\Program Files (x86)\Avaya\Avaya Aura CC Elite Multichannel\Server\Media Stores\Email Media Store\Email Storage" of the EMC Server. This is required to provide the feature of viewing the Body of every email (without having to retrieve it) via the Enhanced History provided by ContactPro. Below is an example of retrieving such an email where the agent does a **Search** for **paul** and retrievers all the emails associated with the word **paul**. Double-clicking on this item will then open the associated email for viewing.



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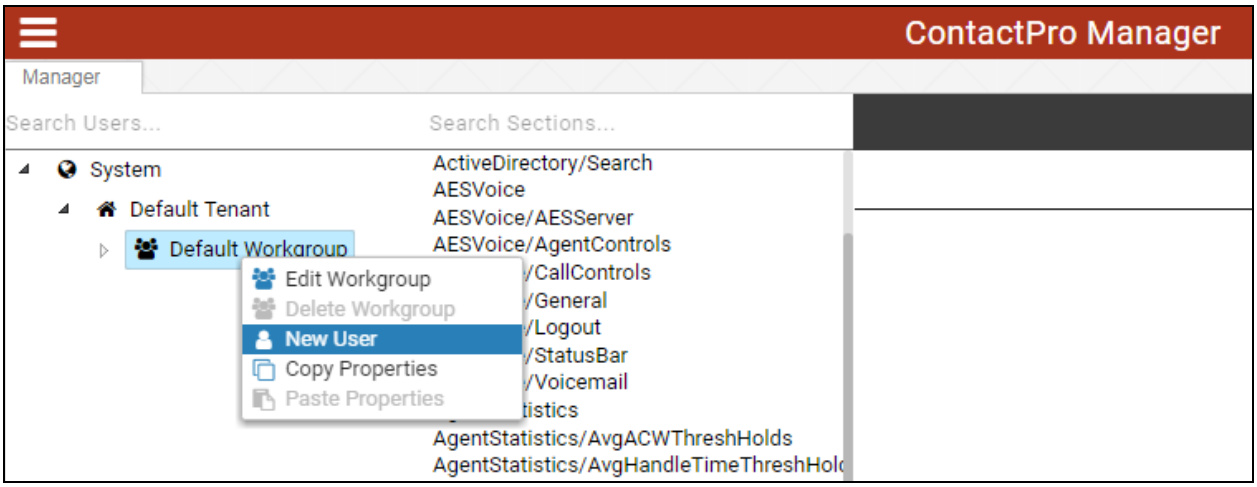
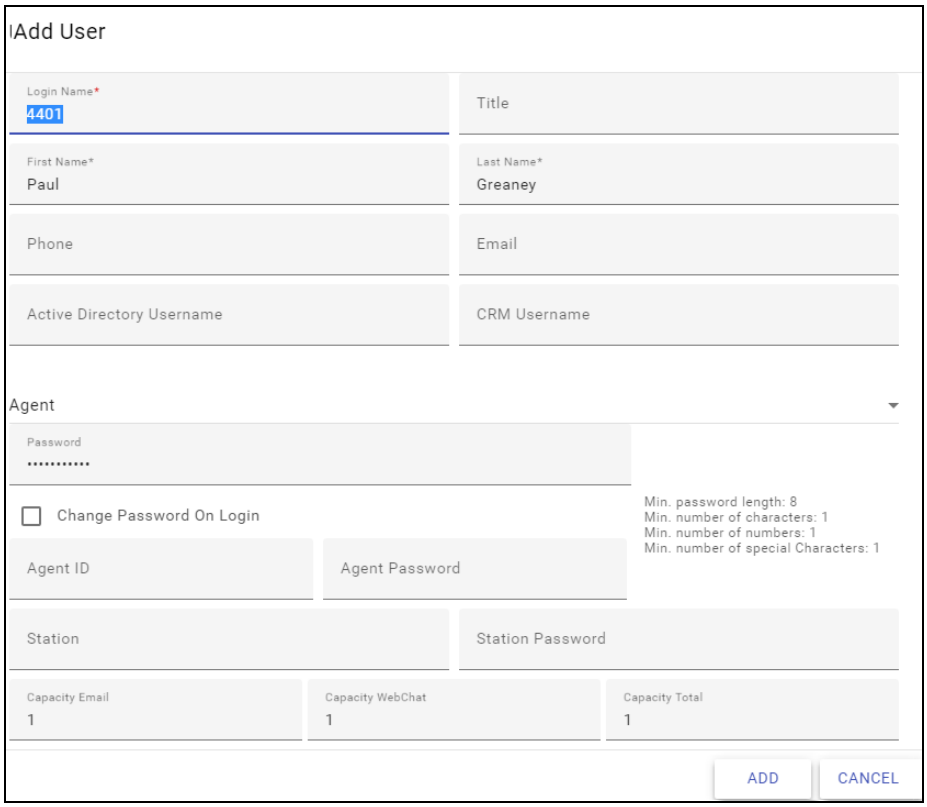
8.3. Configure Users with ContactPro Manager

For every ContactPro Client user, a new user needs to be created. Right-click on a workgroup then click **New User**.



The following fields are required.

- **LoginName** (This is the Agent ID such as that created in **Section 5.2.4** for example).
- **First Name**
- **Last Name**



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9. Verification Steps

This section provides the verification steps that can be performed to verify proper configurations of both Avaya EMC and AES with CCT ContactPro.

9.1. Verify Status of Communication Manager Agent

Enter the command **list agent-loginID** verify that agent **4405** shown in **Section 5.2.4** is logged-in to extension **4000**.

```
list agent-loginID
                                AGENT LOGINID
Login ID     Name           Extension     Dir Agt  AAS/AUD        COR Ag Pr SO
               Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv Skil/Lv

4400         Patrick        unstaffed                                1   lvl
                 33/01   34/01     /       /       /       /       /       /
4401         Agent 1        unstaffed                                1   lvl
                 33/01   34/01     /       /       /       /       /       /
4402         Agent 2        unstaffed                                1   lvl
                 33/01   34/01     /       /       /       /       /       /
4404         Agent 3        unstaffed                                1   lvl
                900/01  910/01  920/01  930/01  901/01  911/01  921/01  931/01
4405         Paul           4000                                     1   lvl
                900/01  910/01  920/01  930/01     /       /       /       /
4406         Dave           unstaffed                                1   lvl
                901/01  911/01  921/01  931/01     /       /       /       /
```

Enter the command **status station 4000** and on **Page 7** verify that the agent is logged-in to the appropriate skills and in the **AI** mode, which represents the Auto In button being pressed, highlighted in **Section 9.5**.

```
status station 4000                                              Page   7 of   7
                                   ACD STATUS

 Grp/Mod  Grp/Mod  Grp/Mod  Grp/Mod  Grp/Mod  Grp/Mod  Grp/Mod
  900/AI      /        /        /        /        /        /    On ACD Call? no
  910/AI      /        /        /        /        /        /
  920/AI        /        /        /        /        /      /
  930/AI        /        /        /        /        /      /
```


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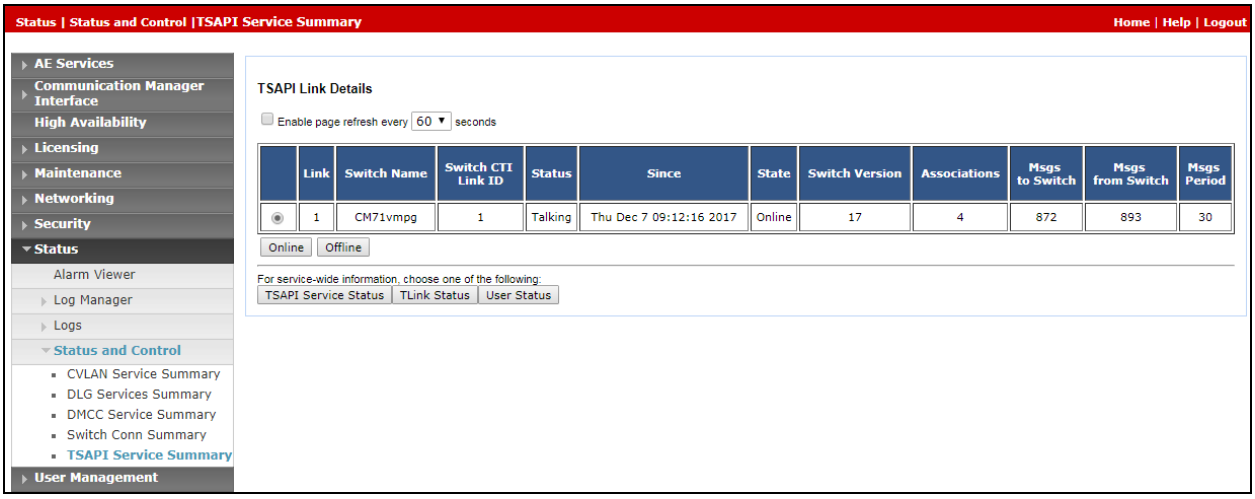
9.2. Verify Avaya Aura® Communication Manager CTI Service State

The following steps can validate that the communication between Communication Manager and AES is functioning correctly. Check the AESVCS link status by using the command **status aesvcs cti-link**. Verify the **Service State** of the CTI 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          7        no      AES71vmpg      established    18        18
```

9.3. Verify TSAPI Link

On the AES 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**.



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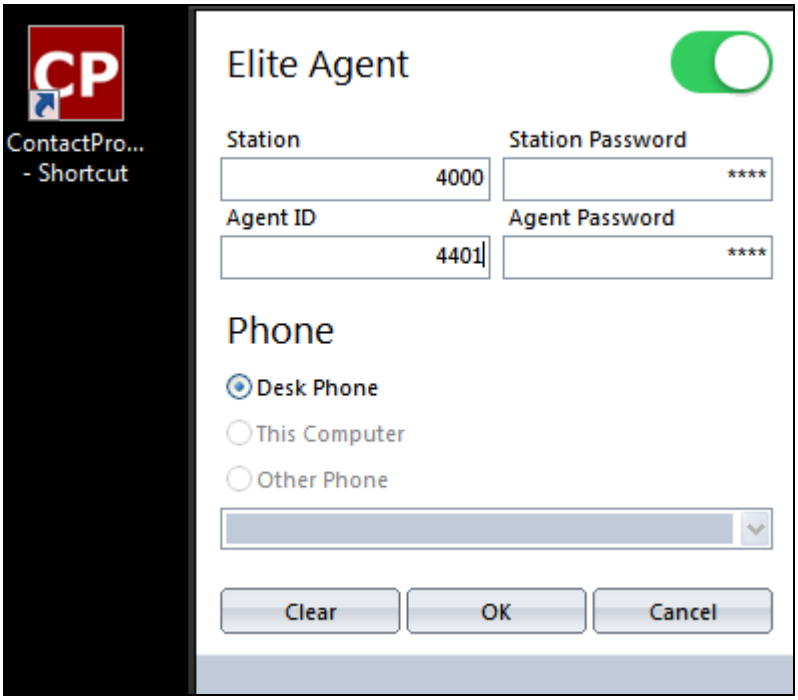
9.4. Verify login of CCT ContactPro

From the Client PC open the application **CCT ContactPro** (shortcut is shown below). Once this is opened fill in the following details:

- **ACM Station ID** — This is the station number that is to be controlled by this Contact Pro application. This station number is noted in the **Appendix**.
- **ACM Station Password** — This is the password for the station that is to be controlled this is the same password noted in the **Appendix**.
- **ACM Agent ID** — This is the Agent ID created or noted in **Section 5.2.4**.
- **ACM Agent Password** — This is the password of the agent noted or created in **Section 5.2.4**.

Click on **OK** to log in to **CCT ContactPro**.



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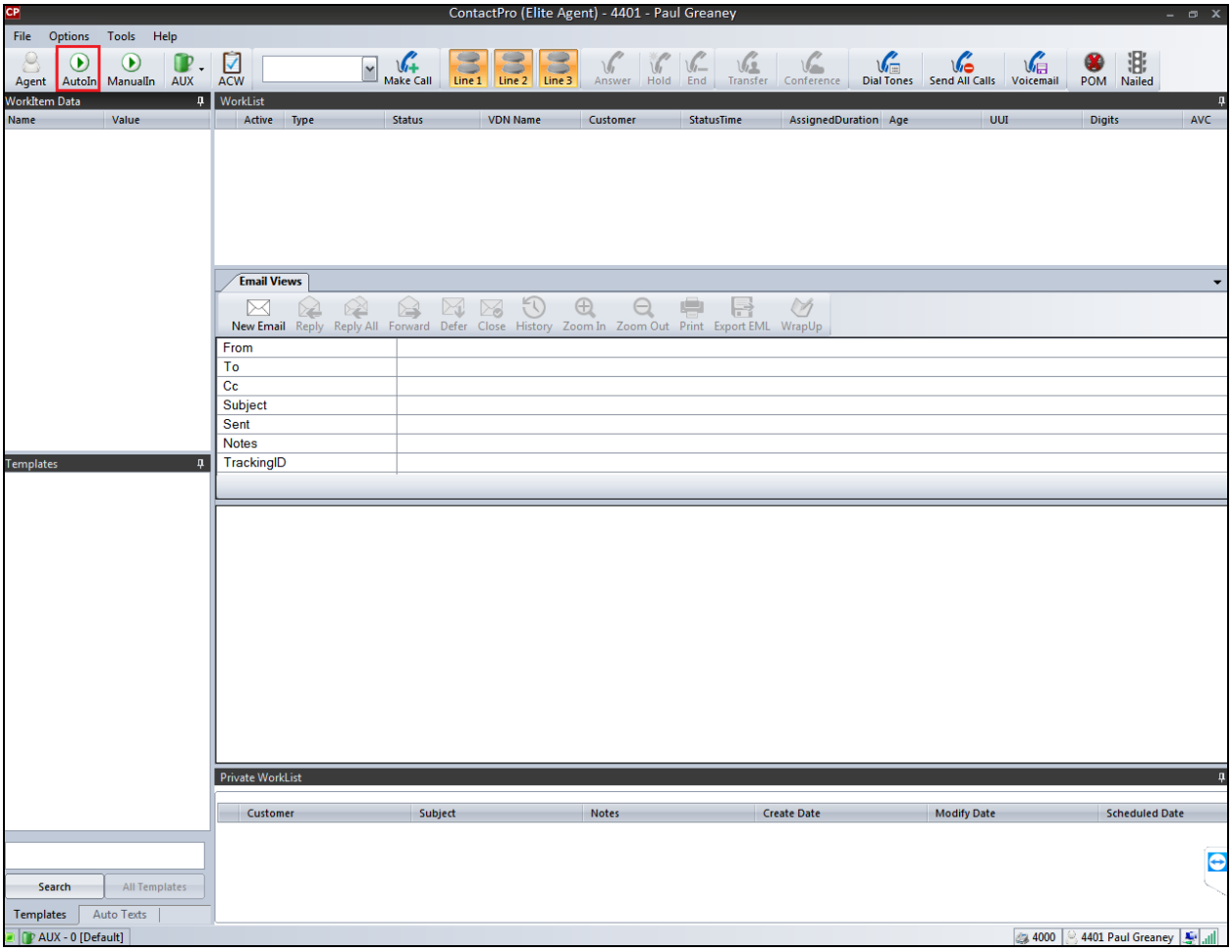
9.5. Verify Agent Status using CCT ContactPro

Once logged in the agent state can be changed using the buttons at the top left highlighted below. Note also the station number (**4000**) and Agent ID (**4401**) once logged in. Click on **AutoIn** to make the agent ready.



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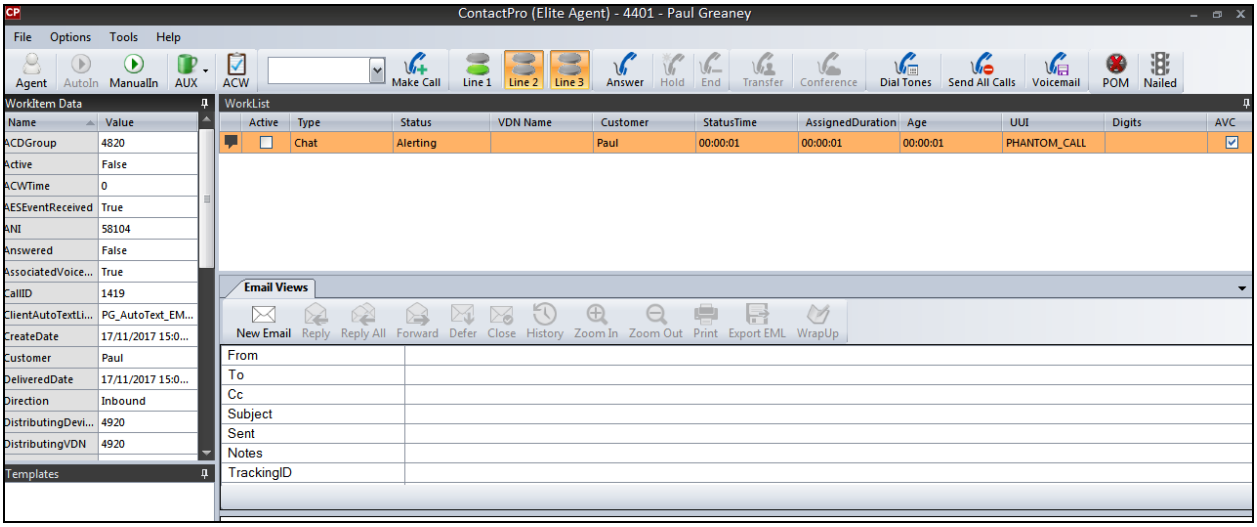
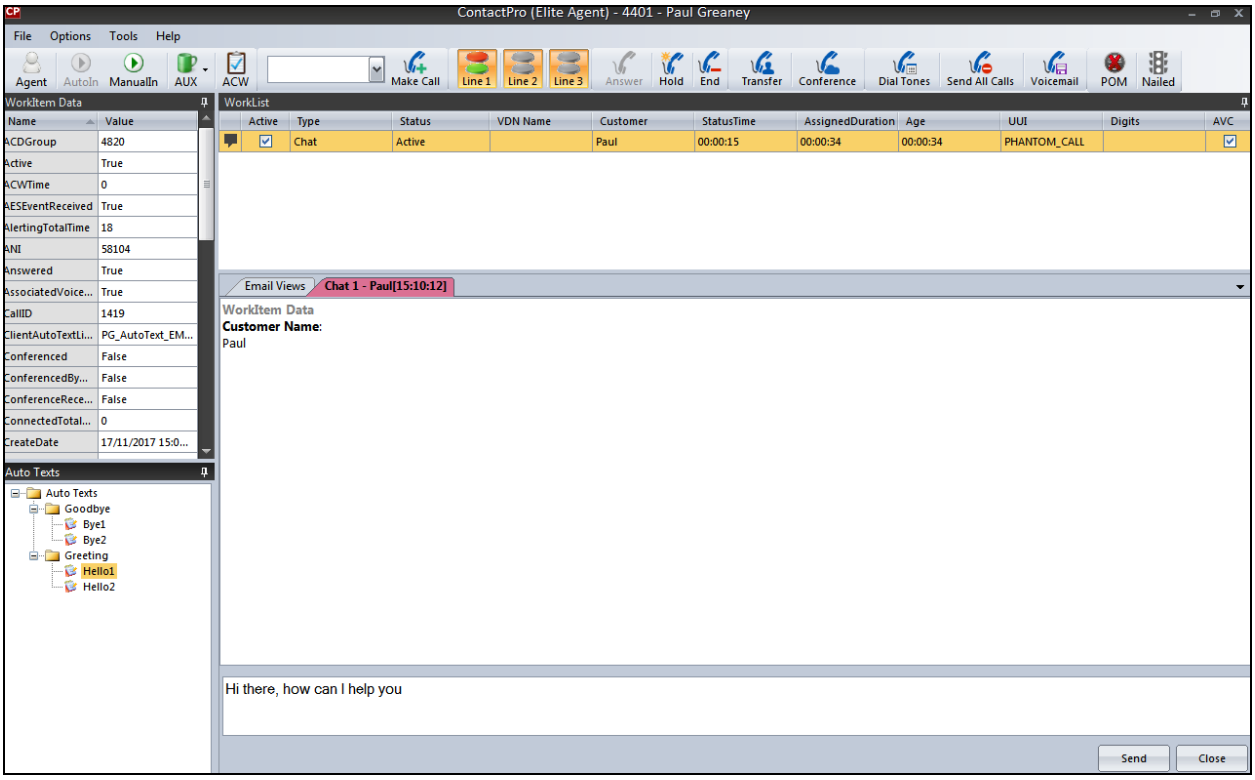
A web request is generated by a customer (not shown) and queued to this agent. Once AutoIn is pressed above the call appears as **Alerting** on the ContactPro desktop. The call can be answered by pressing the **Answer** icon.



Once the call is answered, a **Multimedia Window** is opened showing the web chat request from the customer and the agent can respond to that request as is shown below, by entering some text and clicking **Send**. Also, we can see that the line is busy and the agent is therefore deemed to be on a call even if this is a multimedia call. The agent can hang up or close the call by clicking on **Close** at the bottom right of the Multimedia Window.



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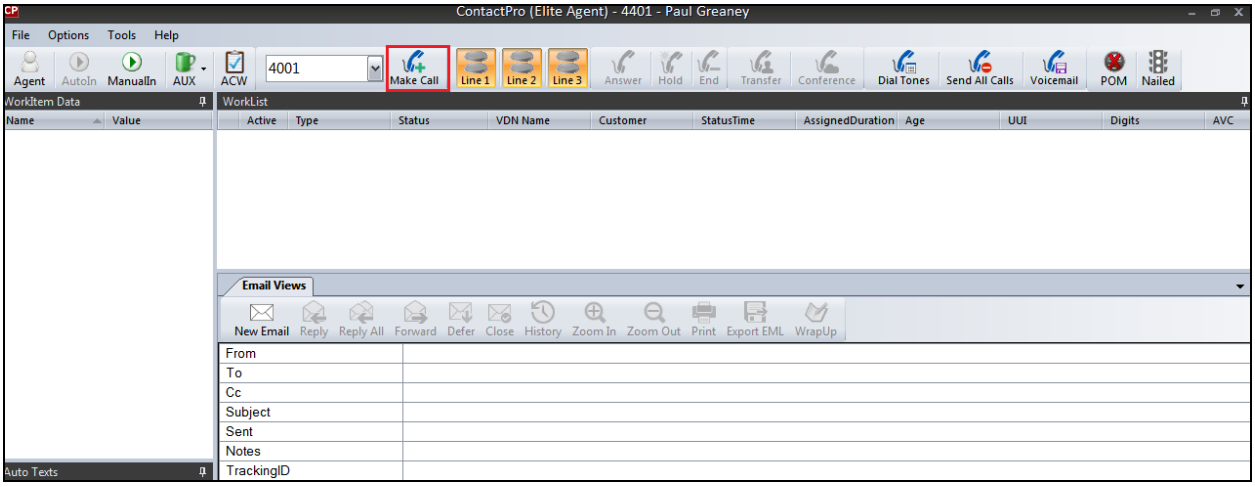
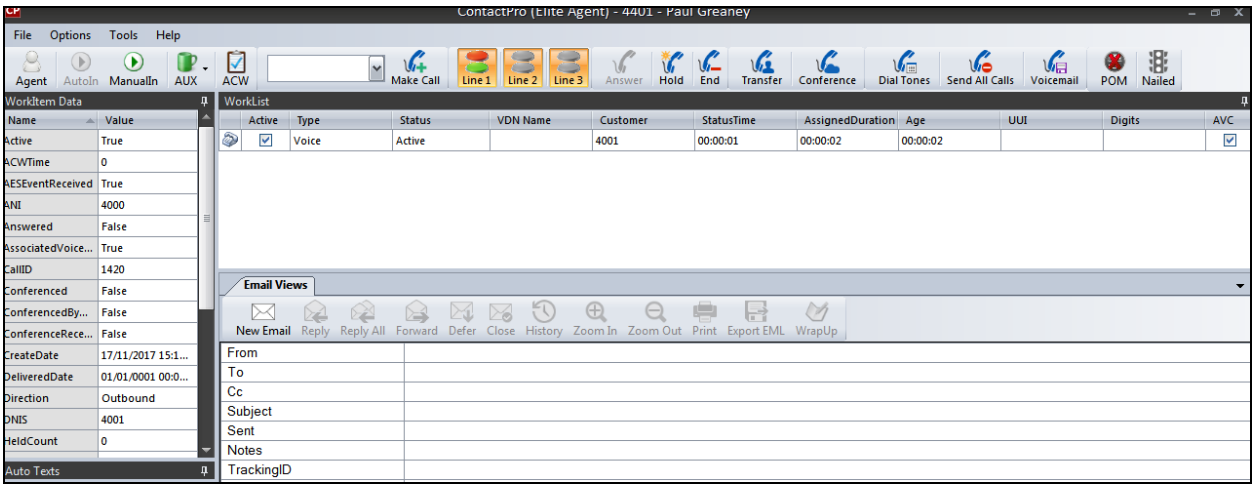
With the multimedia call ended a new call can be made if required again by entering the digits and pressing on **Make Call** as is shown. In this example, the agent is calling the customer at his/her request from the webchat session previous.



The call can then be transferred, conference or put on hold with the buttons displayed along the top of the screen.



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10. Conclusion

These Application Notes describe the configuration steps required for CCT ContactPro from CCT Deutschland GmbH to interoperate with Avaya Aura® Application Enablement Services R7.1 and Avaya Aura® Call Center Elite Multichannel R6.5. All feature and serviceability test cases were completed successfully, with any observations noted in **Section 2.2**.

11. Additional References

This section references the Avaya and CCT ContactPro Deutschland GmbH product documentation that are relevant to these Application Notes.

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

[1] *Deploying Avaya Aura® Call Center Elite Multichannel in an Avaya Customer Experience Virtualized Environment*, Release 6.5.. July 2016.

[2] *Installing Avaya Aura® Call Center Elite Multichannel*, Release 6.5.July 2016.

[3] *Administering Avaya Aura® Call Center Elite Multichannel*, Release 6.5. July 2016.

[4] *Avaya Aura® Call Center Elite Multichannel Release Notes*, Release 6.5. July 2016.

[5] *Administering Avaya Aura® Communication Manager*, Document ID 03-300509.

[6] *Avaya Aura® Communication Manager Feature Description and Implementation*, Document ID 555-245-205.

[7] Administering and Maintaining *Avaya Aura® Application Enablement Services*, Release 7.1.2, December 2017.

The following CCT ContactPro Deutschland GmbH documentation can be obtained using the contact information detailed in **Section 2.3**.

- CCT ContactPro Implementation Guide.
- CCT ContactPro Installation Guide.
- CCT ContactPro User Guide.
- CCT ContactPro Technical Specification.
- CCT ContactPro Test Specification.
- CCT ContactPro Port Ranges.

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Appendix

Avaya 9608 H323 Station 4000

This is a printout of the Avaya 9608 H.323 desk phone used during compliance testing.

Page 1

```
display station 4000                                          Page   1 of   6
                                     STATION

Extension: 4000                         Lock Messages? n               BCC: 0
     Type: 9608                         Security Code:                  TN: 1
     Port: S00057                     Coverage Path 1:                 COR: 1
     Name: CCT Agent                  Coverage Path 2:                 COS: 1
                                      Hunt-to Station:
STATION OPTIONS
                Location:                 Time of Day Lock Table:
              Loss Group: 19
                                                Message Lamp Ext: 4000

        Display Language: english                 Button Modules: 0

          Survivable COR: internal
   Survivable Trunk Dest? y                         IP SoftPhone? y

                                                        IP Video? n
```

Page 2

```
display station 4000                                          Page   2 of   6
                                     STATION
FEATURE OPTIONS
           LWC Reception: spe
          LWC Activation? y                       Coverage Msg Retrieval? y
                                                             Auto Answer: none
             CDR Privacy? n                                Data Restriction? n
                                                 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

        H.320 Conversion? n          Per Station CPN - Send Calling Number?


    MWI Served User Type:
              AUDIX Name:
                                                Coverage After Forwarding? s

                                               Direct IP-IP Audio Connections? y
  Emergency Location Ext: 1005          Always Use? n IP Audio Hairpinning? n
```


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Page 3

```
display station 4000                                          Page   3 of   6
                                    STATION


   Bridged Appearance Origination Restriction? n



                            IP Phone Group ID:


                              ENHANCED CALL FORWARDING
                                     Forwarded Destination         Active
 Unconditional For Internal Calls To:                                 n
                   External Calls To:                                 n
          Busy For Internal Calls To:                                 n
                   External Calls To:                                 n
      No Reply For Internal Calls To:                                 n
                   External Calls To:                                 n
```

Page 4

```
display station 4000                                          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                          5: aux-work    RC:    Grp:
 2: call-appr                          6: auto-in            Grp:
 3: call-appr                          7: manual-in          Grp:
 4: agnt-login                         8: work-code
```


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