Avaya Solution & Interoperability Test Lab

Application Notes for Tetherfi Omni Channel Management Multimedia Agent Client with Avaya Aura® Communication Manager 6.3 and Avaya Aura® Application Enablement Services 6.3 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Tetherfi Omni Channel Management (OCM) Multimedia Agent Client to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services (AES).

Tetherfi Multimedia Agent Client (TMAC) is a web based CTI solution. This thin client provides a single unified CTI desktop capable of servicing Voice, SMS, Email, Chat, Video and Social Media Channels. TMAC communicates with Avaya AES using the (Telephony Services Application Programming Interface) TSAPI Service.

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

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

1. Introduction

These Application Notes describe the configuration steps required for Tetherfi Omni Channel Management (OCM) Multimedia Agent Client (to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services (AES).

2. General Test Approach and Test Results

The feature test cases were performed manually. Inbound and outbound calls were made on Communication Manager and calls handled by agents running the TMAC. In this testing, agents were logged in from the respective phones as expert agents. Also, inbound email were also sent and handled by agents running the TMAC according to their skill levels.

The serviceability test cases were also performed manually by disconnecting/reconnecting the ethernet cable on the client PC, restarting the TSAPI service on AES server as well as the CTI link on Communication Manager.

DevConnect compliance testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect compliance testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member’s solution.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying TMAC for the following:

- Agent in manual in or auto-in login mode, logout and failure scenarios.
- Handling of incoming and outgoing calls.
- Holding and resuming of calls.
- Consult voice transfers as well as voice conference.
- Correct status of Agent reflected on the wallboard API
- Handling of email base on their skill levels.

The serviceability testing focused on verifying the ability of TMAC to recover from adverse conditions such as disconnecting the ethernet cables on the TMAC PC and restarting of the TSAPI service on the Avaya AES server, and CTI link on the Communication Manager.

2.2. Test Results

All feature test cases were successfully completed.

2.3. Support

Technical support on Interlink can be obtained through the following:

- Phone: +65-31507414
- Email: info@ilinknet.com.sg
- Web: http://www.ilinknet.com.sg

3. Reference Configuration

Figure 1 illustrates a sample configuration consisting of a duplex pair of Avaya S8800 Servers, an Avaya G430 Media Gateway, Avaya AES Server and Avaya 96x1 H.323 IP Telephones. TMAC accessed the Tetherfi OCM through browsers installed on a Microsoft Windows 7 Professional PCs. Tetherfi OCM is installed on Microsoft Windows 2012 R2 server which communicates with the TSAPI Service on the Avaya AES Server. Microsoft SQL 2012 was installed as the database on the same server. The Avaya 4548GT-PWR Converged Stackable Switch provides ethernet connectivity to the servers and IP telephones.

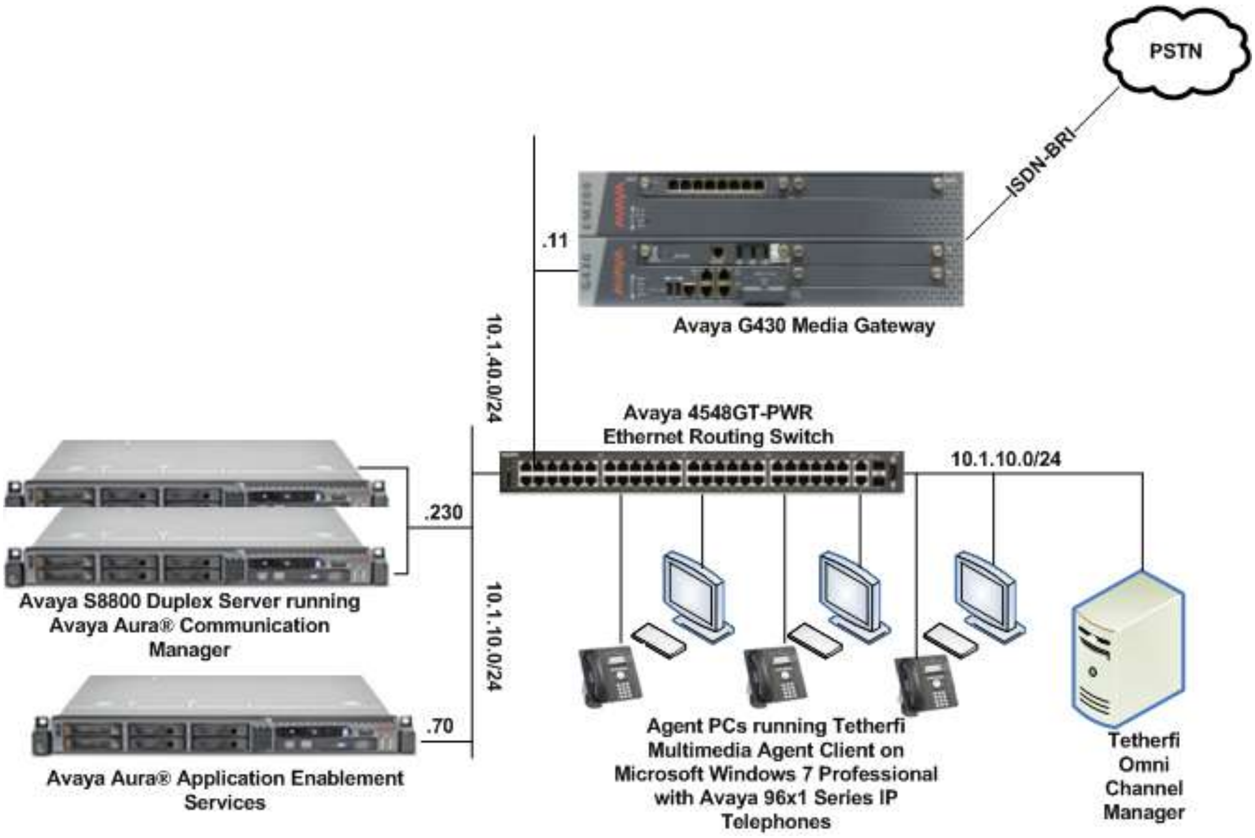

PSTN
ISDN-BRI
.11
Avaya G430 Media Gateway
10.1.40.0/24
Avaya 4548GT-PWR
Ethernet Routing Switch
10.1.10.0/24
.230
Avaya S8800 Duplex Server running
Avaya Aura® Communication
Manager
10.1.10.0/24
.70
Avaya Aura® Application Enablement
Services
Agent PCs running Tetherfi
Multimedia Agent Client on
Microsoft Windows 7 Professional
with Avaya 96x1 Series IP
Telephones
Tetherfi
Omni
Channel
Manager

Figure 1: Test Configuration

4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Version
Avaya Aura® Communication Manager on S8800 Duplex Servers	R6.3.12.0-SP12 (R016x.03.0.124.0-22505)
Avaya G430 Media Gateway	36.14.0
Avaya Aura® Application Enablement Services	R6.3.3 (6.3.3.4.10-0)
96x1 Series (H.323) IP Telephones	6.6029
Tetherfi Omni Channel Management running on Microsoft Windows 2012 R2 with Microsoft SQL 2012 application	1.3.08.05
Tetherfi Multimedia Agent Client accessed through browser on PC running on Microsoft Windows 7 SP1	1.3.08.05

Table 1: Equipment/Software Validated

5. Configure Avaya Communication Manager

This section provides the procedures for configuring Computer Telephony Integration (CTI) links on Avaya Communication Manager. Setup of Agent Stations, Agent Login ID, VDNs, Hunt Groups, Trunks and Call Center features is assumed to be configured and will not be detailed here.

All the configuration changes in Communication Manager are performed through the System Access Terminal (SAT) interface. The highlights in the following screens indicate the values used during the compliance test.

5.1. Configure AES and CTI Links

Avaya AES server forwards CTI requests, responses, and events between Tetherfi OCM and Communication Manager. Avaya AES server communicates with Communication Manager over an AES link. Within the AES link, CTI links may be configured to provide CTI services to CTI applications such as Tetherfi OCM. The following steps demonstrate the configuration of the Communication Manager side of the AES and CTI links.

Step **Description**

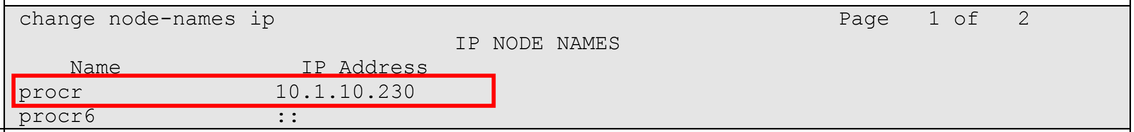
1. Enter the **display system-parameters customer-options** command. On **Page 3**, verify that **Computer Telephony Adjunct Links** is set to **y**. If not, contact an authorized Avaya account representative to obtain the license.

```
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? n                       DCS (Basic)? y
         ASAI Link Core Capabilities? y                 DCS Call Coverage? y
         ASAI Link Plus Capabilities? y                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



        (NOTE: You must logoff & login to effect the permission changes.)
```

2. Enter the **add cti-link m** command, where **m** is a number between 1 and 64, inclusive. Enter a valid **Extension** under the provisioned dial plan in Avaya Communication Manager, set the **Type** field to **ADJ-IP**, and assign a descriptive **Name** to the CTI link.

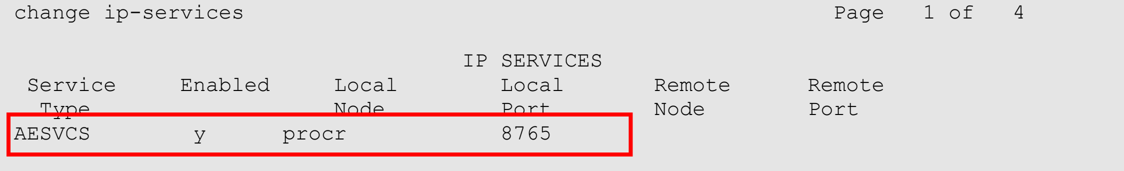
```
add cti-link 3                                                   Page   1 of   3
                                    CTI LINK
 CTI Link: 3
Extension: 10093
     Type: ADJ-IP
                                                                          COR: 1
     Name: TSAPI Service - AES6x
```

Step	Description
3.	Enter the **change node-names ip** command. In the compliance-tested configuration, the processor of the communication manager with the node-name **procr** was utilized for connectivity to Avaya AES server.



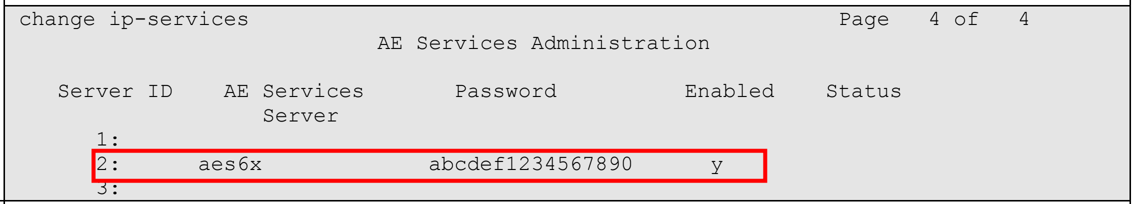
```
change node-names ip                                            Page   1 of   2
                                  IP NODE NAMES
    Name              IP Address
procr               10.1.10.230
procr6              ::
```

Step	Description
4.	Enter the **change ip-services** command. On **Page 1**, configure the **Service Type** field to **AESVCS** and the **Enabled** field to **y**. The **Local Node** field should be set to the **procr** that was configured previously in **Step 3**. During the compliance test, the default port was utilized for the **Local Port** field.



```
change ip-services                                              Page   1 of   4

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

Step	Description
	On **Page 4**, enter the hostname of the Avaya AES server for the **AE Services Server** field. The server name may be obtained by logging in to the Avaya AES server using Secure Shell (SSH) and running the **uname -a** command. Enter an alphanumeric password for the **Password** field and set the **Enabled** field to **y**. The same password will be configured on Avaya AES server in **Section 6.3 Step 2**.



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

   Server ID    AE Services       Password          Enabled    Status
                   Server
      1:
      2:      aes6x             abcdef1234567890      y
      3:
```

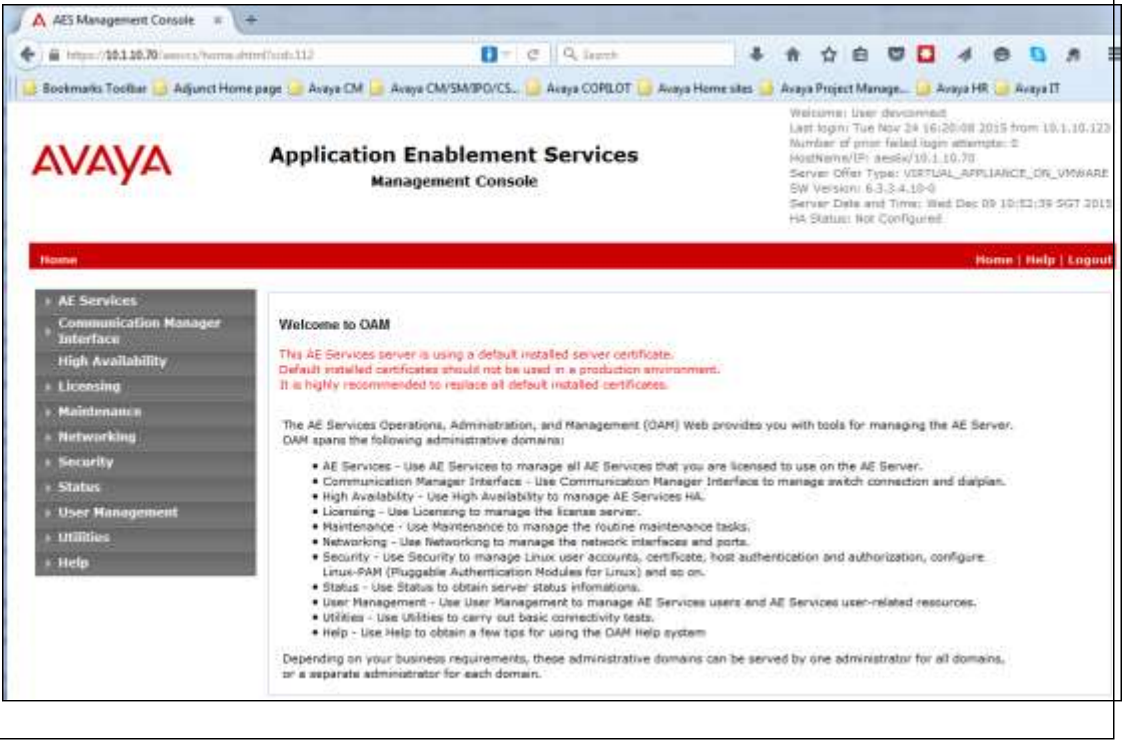
Step	Description
5.	Enter the **save translation** command to save the changes to the system. This completes the configuration of Avaya Communication Manager.

6. Configure Avaya Application Enablement Services

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

- Administer CTI User
- Verify Avaya Application Enablement Services License
- Administer Switch Connection
- Administer TSAPI link and Verify TSAPI Service Port
- Administer CTI user permission

6.1. Administer CTI User

Step	Description
1.	Launch a web browser and enter **https://<IP address of Avaya AES server>** to access the AES Management Console web based interface. Log in to AES Management Console using an administrative login and password (not shown) and the **Welcome To OAM** screen will be displayed. 

Welcome: User devconnect
Last login: Tue Nov 24 16:20:08 2015 from 10.1.10.123
Number of prior failed login attempts: 0
HostName/IP: aes6x/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Dec 09 10:52:39 SGT 2015
HA Status: Not Configured

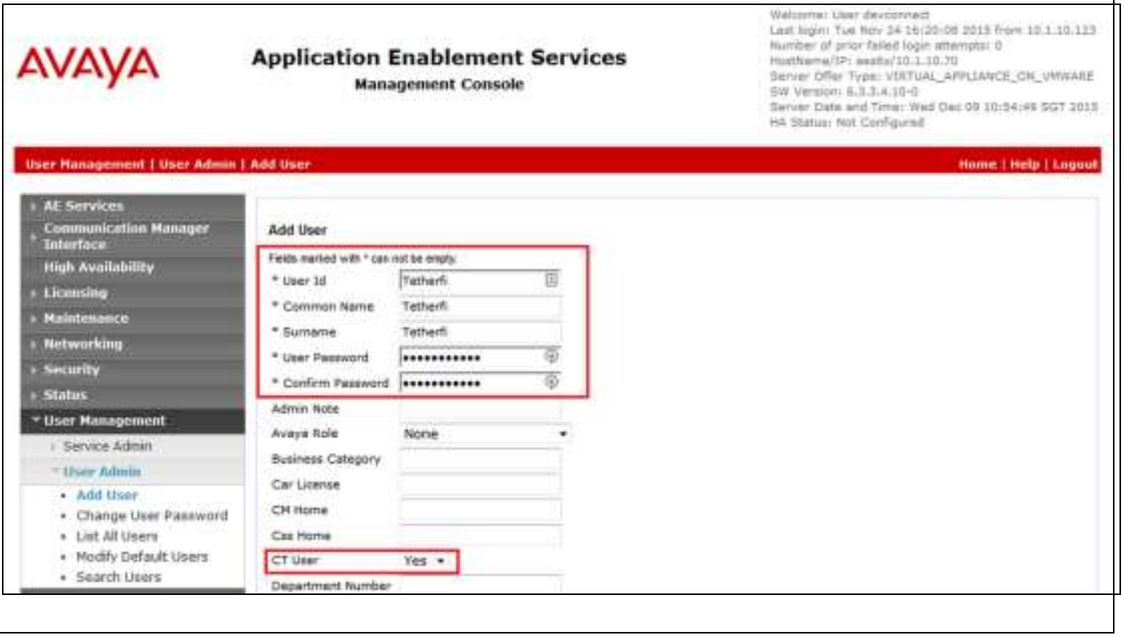
Welcome to OAM

This AE Services server is using a default installed server certificate.
Default installed certificates should not be used in a production environment.
It is highly recommended to replace all default installed certificates.

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

- AE Services - Use AE Services to manage all AE Services that you are licensed to use on the AE Server.
- Communication Manager Interface - Use Communication Manager Interface to manage switch connection and dialplan.
- High Availability - Use High Availability to manage AE Services HA.
- Licensing - Use Licensing to manage the license server.
- Maintenance - Use Maintenance to manage the routine maintenance tasks.
- Networking - Use Networking to manage the network interfaces and ports.
- Security - Use Security to manage Linux user accounts, certificate, host authentication and authorization, configure Linux-PAM (Pluggable Authentication Modules for Linux) and so on.
- Status - Use Status to obtain server status informations.
- User Management - Use User Management to manage AE Services users and AE Services user-related resources.
- Utilities - Use Utilities to carry out basic connectivity tests.
- Help - Use Help to obtain a few tips for using the OAM Help system

Depending on your business requirements, these administrative domains can be served by one administrator for all domains, or a separate administrator for each domain.

Step	Description
2.	Select **User Management → User Admin → Add User** in the left pane. Specify a value for **User Id**, **Common Name**, **Surname**, **User Password** and **Confirm Password**. Set **CT User** to **Yes**. Use the values for **User Id** and **User Password** to configure OCM in **Section 7** to access the TSAPI Service on Avaya AES server. Scroll down to the bottom of the page and click **Apply** (not shown). 

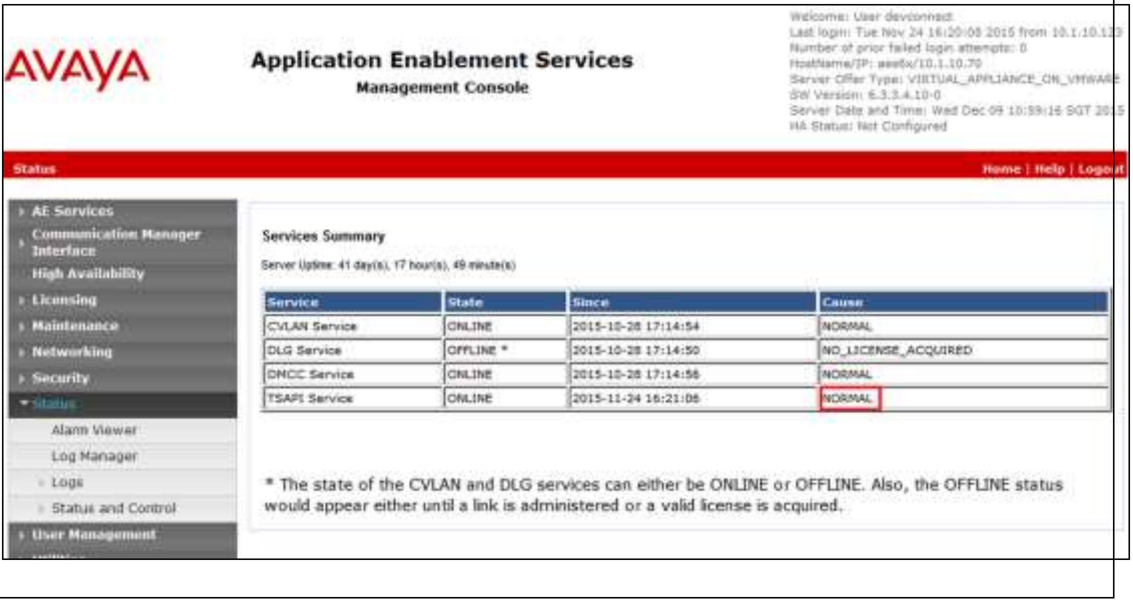
Welcome: User devconnect
Last login: Tue Nov 24 16:20:08 2015 from 10.1.10.133
Number of prior failed login attempts: 0
HostName/IP: aesdx/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Dec 09 10:54:46 SGT 2015
HA Status: Not Configured

Add User

Fields marked with * can not be empty.

* User Id	Tetherfi
* Common Name	Tetherfi
* Surname	Tetherfi
* User Password	••••••••••••
* Confirm Password	••••••••••••
Admin Note	
Avaya Role	None
Business Category	
Car License	
CM Home	
Css Home	
CT User	Yes
Department Number	

6.2. Verify Avaya Application Enablement Services License

Step	Description
1.	Select **Status f**rom the Welcome to OAM Screen page. Verify that Avaya Application Enablement Services license has proper permissions for the features illustrated in these Application Notes by ensuring the TSAPI service is licensed. If the TSAPI service is not licensed, then contact the Avaya sales team or business partner for a proper license file. 

Welcome: User devconnect
Last login: Tue Nov 24 16:20:08 2015 from 10.1.10.123
Number of prior failed login attempts: 0
HostName/IP: aes6x/10.1.10.79
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Dec 09 10:59:16 SGT 2015
HA Status: Not Configured

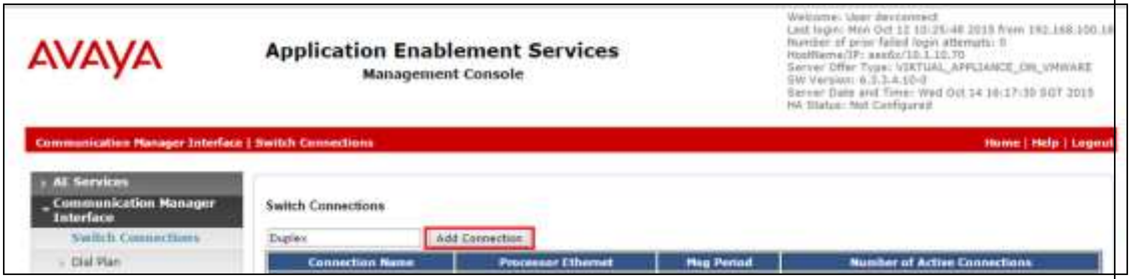
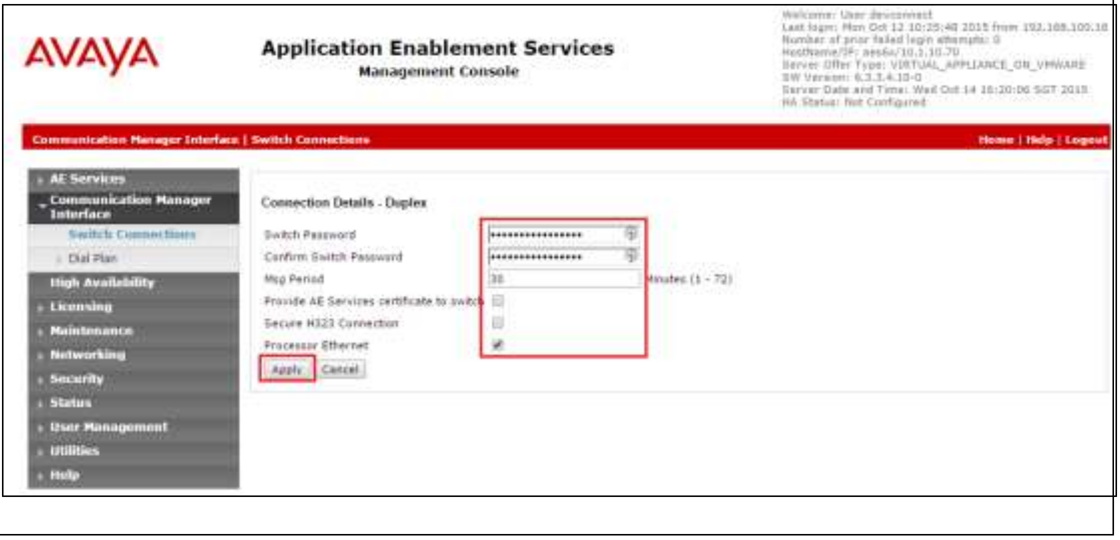
Services Summary

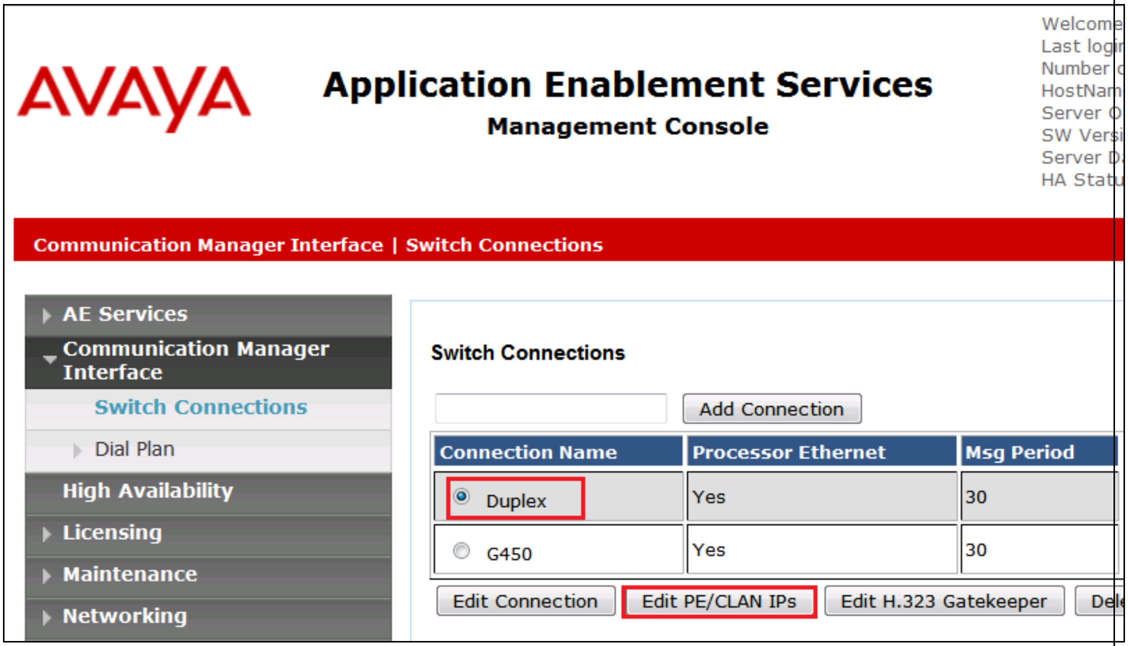
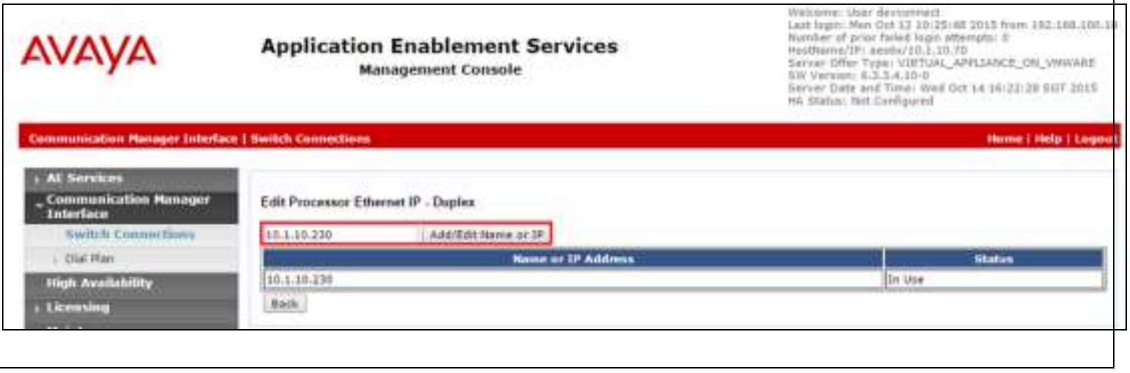
Server Uptime: 41 day(s), 17 hour(s), 49 minute(s)

Service	State	Since	Cause
CVLAN Service	ONLINE	2015-10-28 17:14:54	NORMAL
DLG Service	OFFLINE *	2015-10-28 17:14:50	NO_LICENSE_ACQUIRED
DMCC Service	ONLINE	2015-10-28 17:14:56	NORMAL
TSAPI Service	ONLINE	2015-11-24 16:21:06	NORMAL

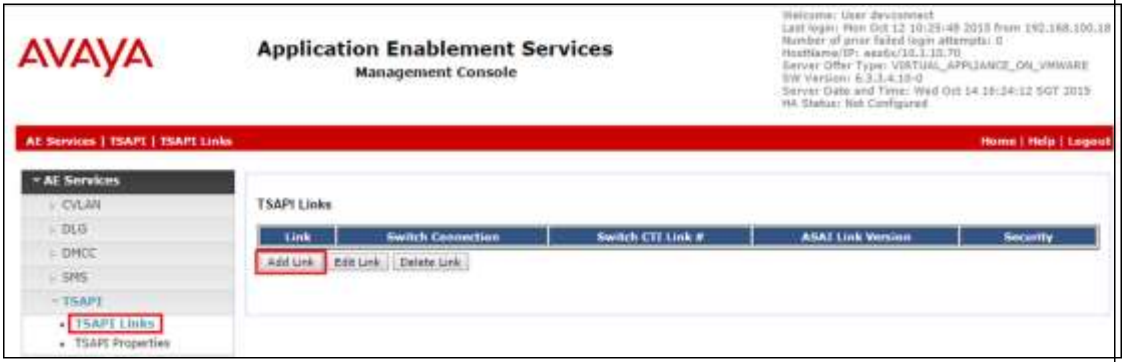
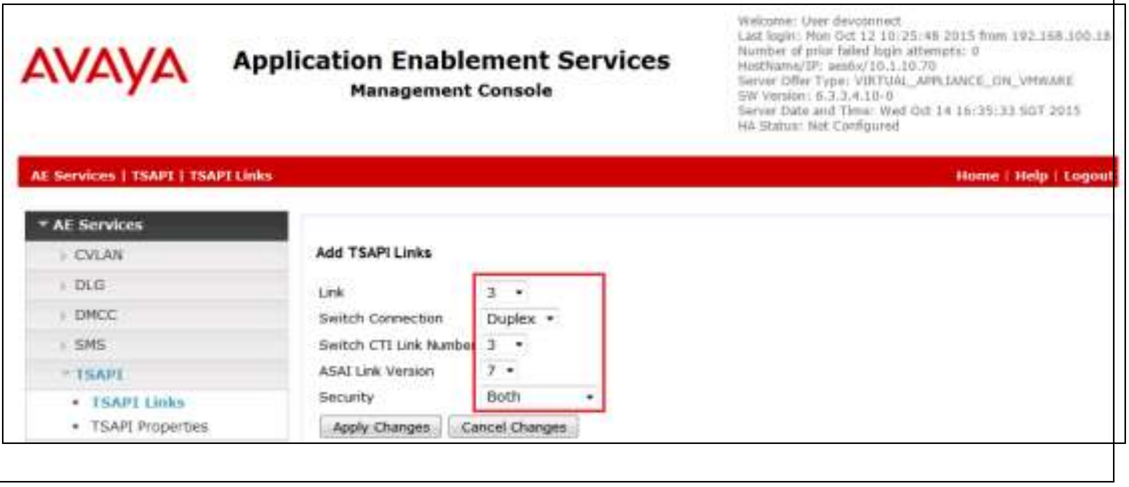
* The state of the CVLAN and DLG services can either be ONLINE or OFFLINE. Also, the OFFLINE status would appear either until a link is administered or a valid license is acquired.

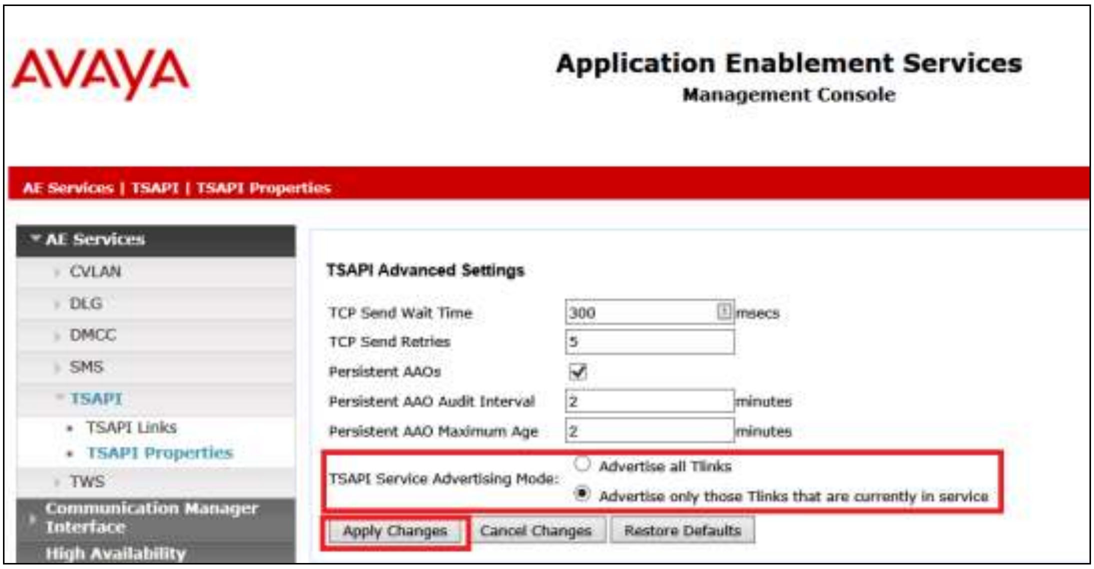
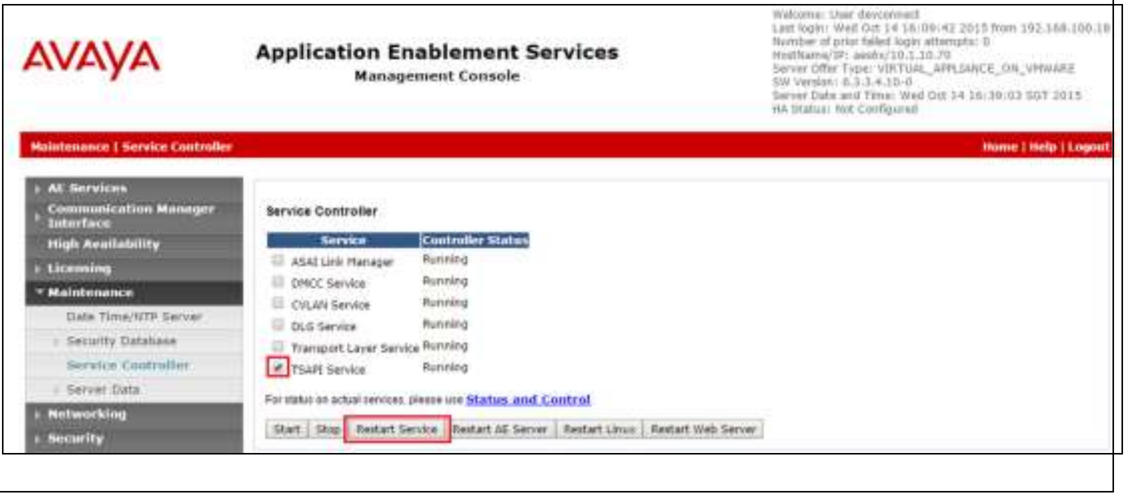
6.3. Administer Switch Connection

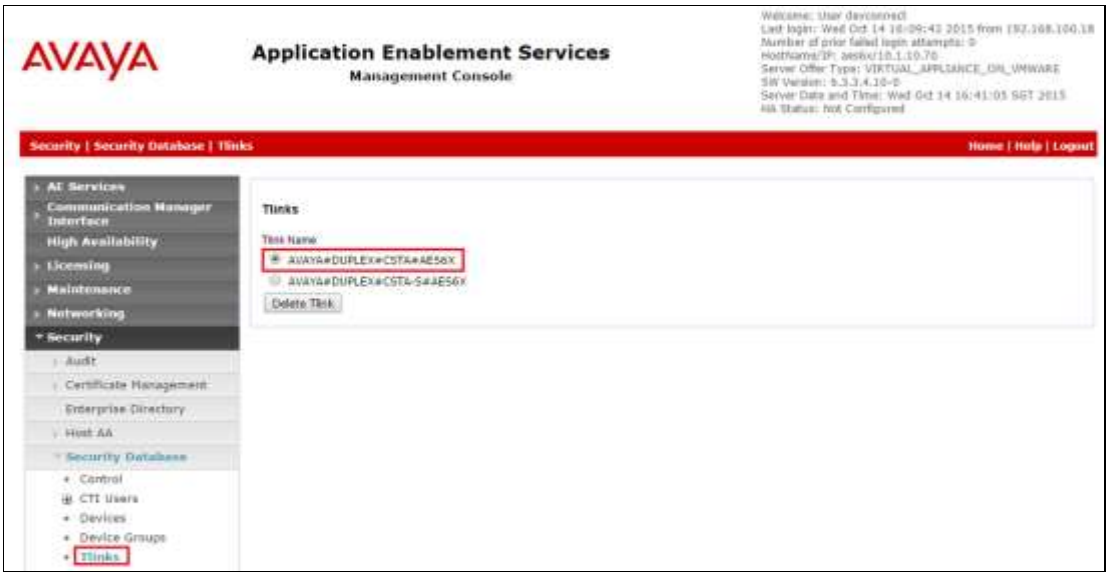
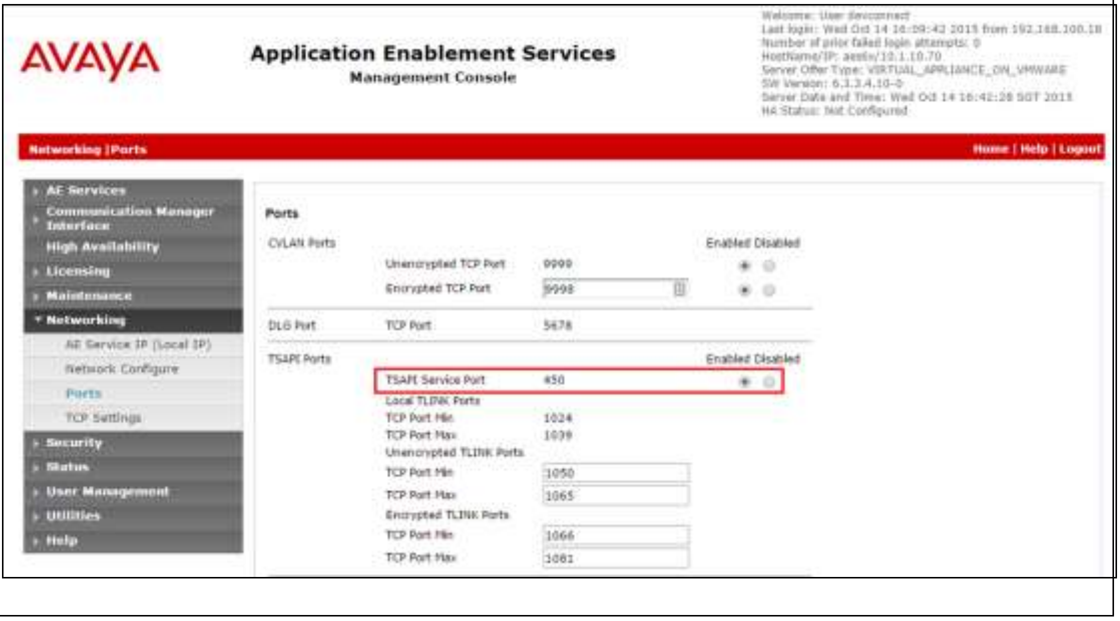
Step	Description
1.	From the Home menu, select **Communication Manager Interface → Switch Connections**. Enter a descriptive name for the switch connection and click **Add Connection**. In this configuration, **Duplex** is used.  Welcome: User devconnect Last login: Mon Oct 12 10:25:48 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aes6x/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:17:30 SGT 2015 HA Status: Not Configured Switch Connections Duplex Connection Name | Processor Ethernet | Msg Period | Number of Active Connections AVAYA Application Enablement Services Management Console Communication Manager Interface | Switch Connections Home | Help | Logout AE Services Communication Manager Interface Switch Connections Dial Plan Add Connection
2.	The **Connection Details – Duplex** screen is displayed. For the **Switch Password** and **Confirm Switch Password** fields, enter the password that was administered in Avaya Communication Manager using the IP Services form in **Section 5.1 Step 4**. Here we are using the **Processor Ethernet** as well for connection and the field needs to be checked. Click on **Apply** to effect changes.  Welcome: User devconnect Last login: Mon Oct 12 10:25:48 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aes6x/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:20:06 SGT 2015 HA Status: Not Configured Connection Details - Duplex Switch Password •••••••••••••••• Confirm Switch Password •••••••••••••••• Msg Period 30 Minutes (1 - 72) Provide AE Services certificate to switch □ Secure H323 Connection □ Processor Ethernet ☑ AVAYA Application Enablement Services Management Console Communication Manager Interface | Switch Connections Home | Help | Logout AE Services Communication Manager Interface Switch Connections Dial Plan High Availability Licensing Maintenance Networking Security Status User Management Utilities Help Apply Cancel

<table>
<tr><th>Step</th><th>Description</th></tr>
<tr><td>3.</td><td>The Switch Connections screen is displayed. Select the newly added switch connection name and click <b>Edit PE/CLAN IPs</b>.

Welcome
Last login
Number o
HostNam
Server O
SW Versi
Server D
HA Statu
Application Enablement Services
Management Console
Communication Manager Interface | Switch Connections
AE Services
Communication Manager Interface
Switch Connections
Dial Plan
High Availability
Licensing
Maintenance
Networking
Switch Connections
Add Connection
<table>
<tr><th>Connection Name</th><th>Processor Ethernet</th><th>Msg Period</th></tr>
<tr><td>● Duplex</td><td>Yes</td><td>30</td></tr>
<tr><td>○ G450</td><td>Yes</td><td>30</td></tr>
</table>
Edit Connection | Edit PE/CLAN IPs | Edit H.323 Gatekeeper | Del</td></tr>
<tr><td>5.</td><td>In the <b>Edit Processor Ethernet IP – Duplex</b> screen, enter the host name or IP address of the PE/C-LAN used for AES connectivity. In this case, <b>10.1.10.230</b> is used, which corresponds to the Common IP address of the Avaya Communication Manager. Click <b>Add/Edit Name or IP</b>.

Welcome: User devconnect
Last login: Mon Oct 12 10:25:48 2015 from 192.168.100.18
Number of prior failed login attempts: 0
HostName/IP: aesdx/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Oct 14 16:22:28 SGT 2015
HA Status: Not Configured
Application Enablement Services
Management Console
Communication Manager Interface | Switch Connections
Home | Help | Logout
AE Services
Communication Manager Interface
Switch Connections
Dial Plan
High Availability
Licensing
Edit Processor Ethernet IP - Duplex
10.1.10.230 | Add/Edit Name or IP
<table>
<tr><th>Name or IP Address</th><th>Status</th></tr>
<tr><td>10.1.10.230</td><td>In Use</td></tr>
</table>
Back</td></tr>
</table>

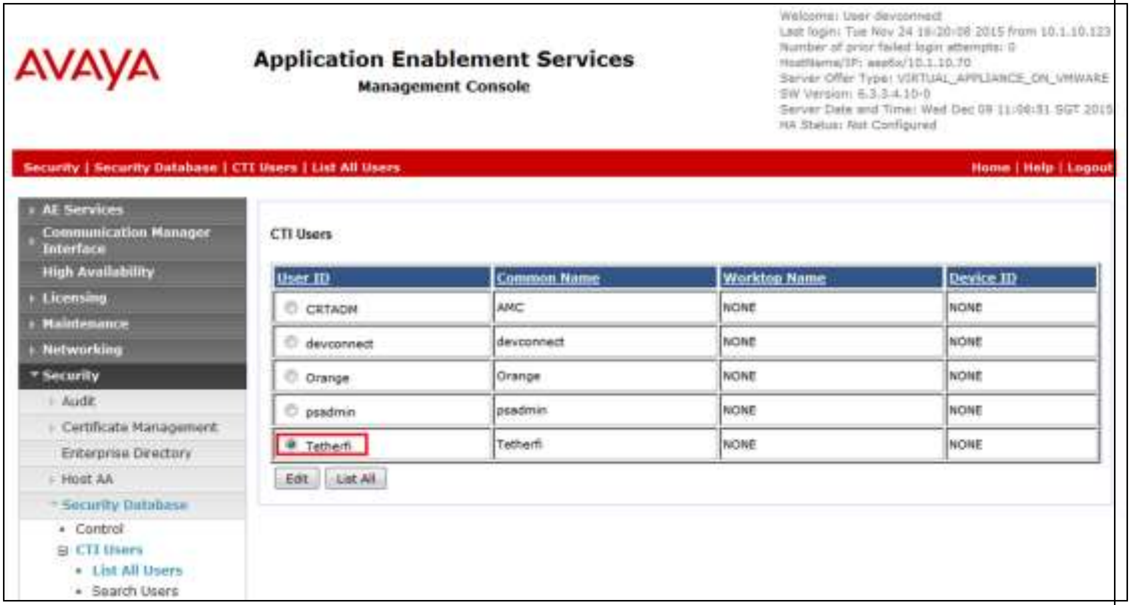
6.4. Administer TSAPI Link and Verify TSAPI Service Port

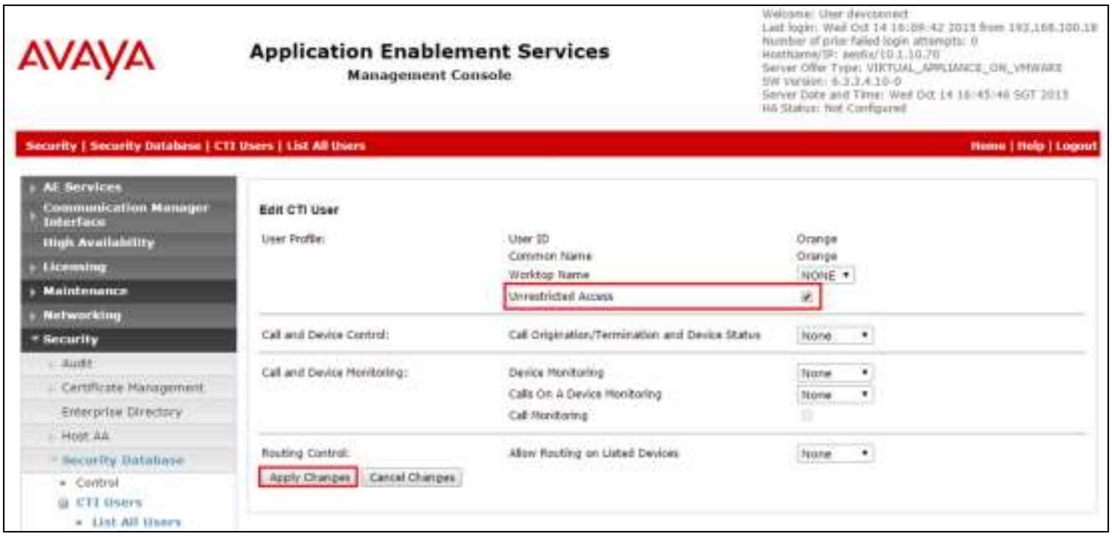
Step	Description
1.	To administer a TSAPI link on AES, select **AE Services → TSAPI → TSAPI Links**. Click **Add Link**.  AVAYA Application Enablement Services Management Console AE Services | TSAPI | TSAPI Links Home | Help | Logout AE Services CVLAN DLG DMCC SMS TSAPI TSAPI Links TSAPI Properties Add Link Edit Link Delete Link Welcome: User devconnect Last login: Mon Oct 12 10:25:48 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aes6x/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:24:12 SGT 2015 HA Status: Not Configured TSAPI Links Link | Switch Connection | Switch CTI Link # | ASAI Link Version | Security
2.	In the **Add TSAPI Links** screen, select the following values: • **Link:** Select an available Link number from 1 to 16. • **Switch Connection:** Administered switch connection in **Section 6.3 Step 1**. • **Switch CTI Link Number:** Corresponding CTI link number in **Section 5.1 Step2**. • **ASAI Link Version:** Set to **7** for the latest version. • **Security:** Select **Both** to allow for encrypted or unencrypted link. Note that the actual values may vary. Click **Apply Changes**.  AVAYA Application Enablement Services Management Console AE Services | TSAPI | TSAPI Links Home | Help | Logout AE Services CVLAN DLG DMCC SMS TSAPI TSAPI Links TSAPI Properties Apply Changes Cancel Changes Welcome: User devconnect Last login: Mon Oct 12 10:25:48 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aes6x/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:35:33 SGT 2015 HA Status: Not Configured Add TSAPI Links Link 3 Switch Connection Duplex Switch CTI Link Number 3 ASAI Link Version 7 Security Both

Step	Description
3.	From the home screen, select **AE Services → TSAPI → TSAPI Properties**. Select the button on **Advertise only those Tlinks that are currently in service**. This will have the effect that only those Tlinks that are in service will be available to TSAPI applications. Any Tlinks that are not in service will **not** be available to TSAPI applications.  AVAYA Application Enablement Services Management Console AE Services | TSAPI | TSAPI Properties TSAPI Advanced Settings TCP Send Wait Time: 300 msecs TCP Send Retries: 5 Persistent AAOs: ☑ Persistent AAO Audit Interval: 2 minutes Persistent AAO Maximum Age: 2 minutes TSAPI Service Advertising Mode: ○ Advertise all Tlinks ● Advertise only those Tlinks that are currently in service Apply Changes | Cancel Changes | Restore Defaults
4.	To restart the TSAPI Service, select **Maintenance → Service Controller** from the Home menu. Check the **TSAPI Service** checkbox and click **Restart Service**.  AVAYA Application Enablement Services Management Console Welcome: User devconnect Last login: Wed Oct 14 16:09:42 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aesdx/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:30:03 SGT 2015 HA Status: Not Configured Maintenance | Service Controller Service Controller Service / Controller Status □ ASAI Link Manager: Running □ DMCC Service: Running □ CVLAN Service: Running □ DLG Service: Running □ Transport Layer Service: Running ☑ TSAPI Service: Running For status on actual services, please use Status and Control Start | Stop | Restart Service | Restart AE Server | Restart Linux | Restart Web Server

Step	Description
5.	Navigate to the Tlinks screen by selecting **Security → Security Database → Tlinks** from the Welcome to OAM home menu. Note the value of the **Tlink Name**, as this will be needed to configure the Omni Channel Management in **Section 7**. In this configuration, the unencrypted **Tlink Name AVAYA#DUPLEX#CSTA#AES6X,** which is automatically assigned by the Avaya AES server, is used.  Welcome: User devconnect Last login: Wed Oct 14 16:09:42 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aes6x/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:41:05 SGT 2015 HA Status: Not Configured Security | Security Database | Tlinks Tlinks Tlink Name ● AVAYA#DUPLEX#CSTA#AES6X ○ AVAYA#DUPLEX#CSTA-S#AES6X AVAYA Application Enablement Services Management Console Home | Help | Logout AE Services Communication Manager Interface High Availability Licensing Maintenance Networking Security Audit Certificate Management Enterprise Directory Host AA Security Database Control CTI Users Devices Device Groups Tlinks Delete Tlink
6.	Navigate to the networking ports by **Networking → Ports**. Verify that the default **TSAPI Service Port 450** is enabled.  Welcome: User devconnect Last login: Wed Oct 14 16:09:42 2015 from 192.168.100.18 Number of prior failed login attempts: 0 HostName/IP: aes6x/10.1.10.70 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE SW Version: 6.3.3.4.10-0 Server Date and Time: Wed Oct 14 16:42:28 SGT 2015 HA Status: Not Configured Networking |Ports Ports CVLAN Ports — Enabled Disabled Unencrypted TCP Port 9999 ● ○ Encrypted TCP Port 9998 ● ○ DLG Port — TCP Port 5678 TSAPI Ports — Enabled Disabled TSAPI Service Port 450 ● ○ Local TLINK Ports TCP Port Min 1024 TCP Port Max 1039 Unencrypted TLINK Ports TCP Port Min 1050 TCP Port Max 1065 Encrypted TLINK Ports TCP Port Min 1066 TCP Port Max 1081 AVAYA Application Enablement Services Management Console Home | Help | Logout AE Services Communication Manager Interface High Availability Licensing Maintenance Networking AE Service IP (Local IP) Network Configure Ports TCP Settings Security Status User Management Utilities Help

6.5. Administer CTI User Permission

<table>
<tr><th>Step</th><th>Description</th></tr>
<tr><td>1.</td><td>Select <b>Security → Security Database → CTI Users → List All Users</b> from the AES Management Console Home menu. Select the <b>User ID</b> created in <b>Section 6.1 Step 2</b> and click <b>Edit</b>.


Welcome: User devconnect
Last login: Tue Nov 24 16:20:08 2015 from 10.1.10.123
Number of prior failed login attempts: 0
HostName/IP: aes6x/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Dec 09 11:06:51 SGT 2015
HA Status: Not Configured
CTI Users
<table>
<tr><th>User ID</th><th>Common Name</th><th>Worktop Name</th><th>Device ID</th></tr>
<tr><td>○ CRTADN</td><td>AMC</td><td>NONE</td><td>NONE</td></tr>
<tr><td>○ devconnect</td><td>devconnect</td><td>NONE</td><td>NONE</td></tr>
<tr><td>○ Orange</td><td>Orange</td><td>NONE</td><td>NONE</td></tr>
<tr><td>○ psadmin</td><td>psadmin</td><td>NONE</td><td>NONE</td></tr>
<tr><td>● Tetherfi</td><td>Tetherfi</td><td>NONE</td><td>NONE</td></tr>
</table>
</td></tr>
<tr><td>2.</td><td>Tick the <b>Unrestricted Access</b> box. Click <b>Apply Changes</b>.


Welcome: User devconnect
Last login: Wed Oct 14 16:09:42 2015 from 192.168.100.18
Number of prior failed login attempts: 0
HostName/IP: aes6x/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Oct 14 16:45:46 SGT 2015
HA Status: Not Configured
Edit CTI User
User Profile: User ID Orange
Common Name Orange
Worktop Name NONE
Unrestricted Access ☑
Call and Device Control: Call Origination/Termination and Device Status None
Call and Device Monitoring: Device Monitoring None
Calls On A Device Monitoring None
Call Monitoring □
Routing Control: Allow Routing on Listed Devices None
</td></tr>
</table>

7. Configure Tetherfi Multimedia Agent Client

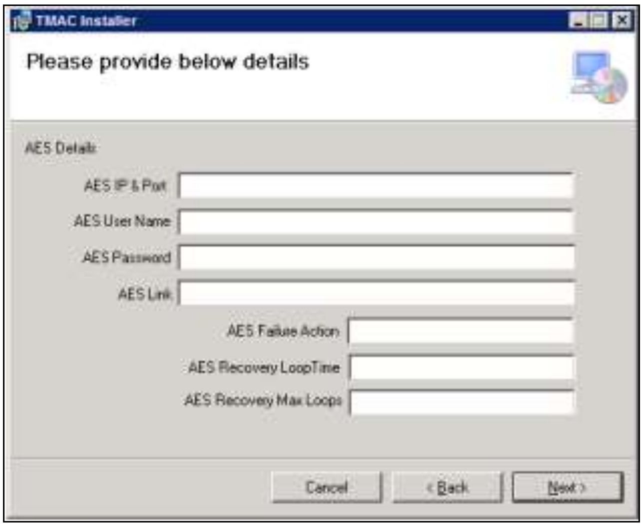
This section highlights the configuration of TMAC which includes the following areas:

- Configure Omni Channel Management
- Configure Agents

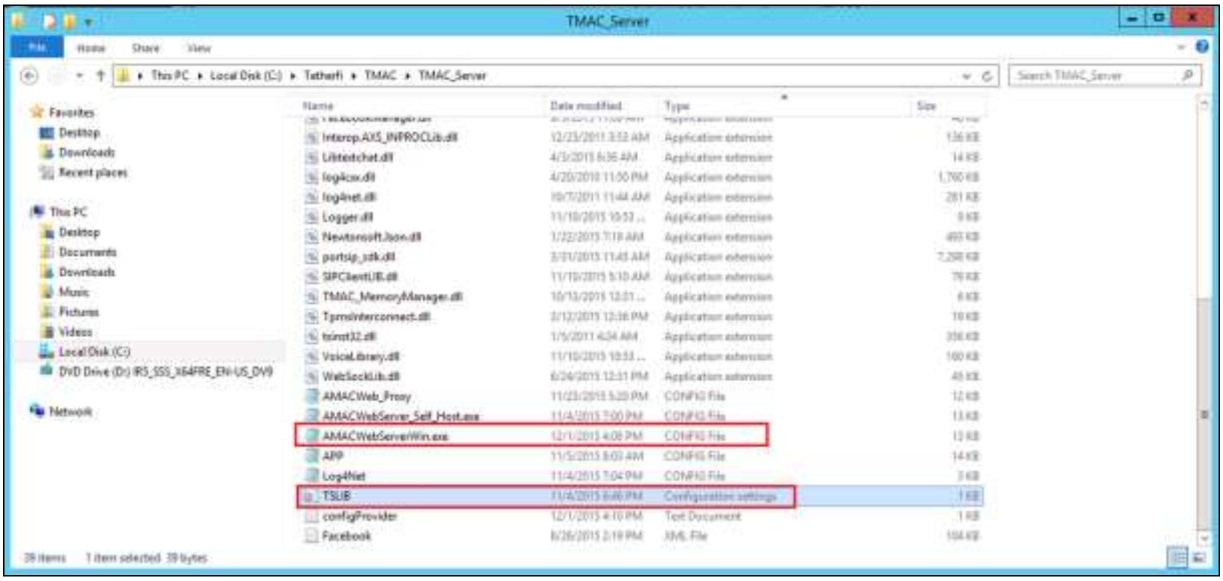
7.1. Configure Omni Channel Management

7.1.1. Setup & Configuration files

Installation and configuration of OCM server will be performed by Interlink engineers and will not be detailed here. Below installer screen will help setup the basic TMAC configuration. However, the interface setting to AES is illustrated below.

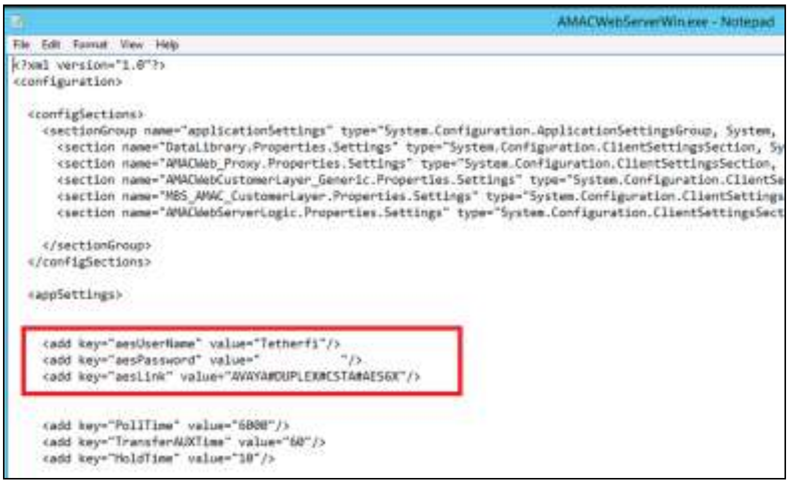


Locate the file ‘**AMACWebServerWin.exe.config**’ and ‘**TSLIB.ini’** configuration settings file. In this compliance testing it was located in **C:\Tetherfi\TMAC\TMAC_Server**. This path is specified during the TMAC Server software installation.



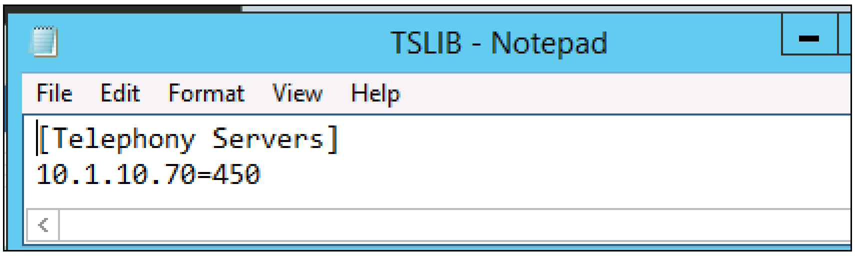
Name	Date modified	Type	Size
Interop.AXS_INPROCLib.dll	12/23/2011 3:53 AM	Application extension	136 KB
Libtextchat.dll	4/3/2015 6:36 AM	Application extension	14 KB
log4cxx.dll	4/20/2010 11:50 PM	Application extension	1,760 KB
log4net.dll	10/7/2011 11:44 AM	Application extension	281 KB
Logger.dll	11/10/2015 10:53 ...	Application extension	9 KB
Newtonsoft.Json.dll	1/22/2015 7:19 AM	Application extension	493 KB
portsip_sdk.dll	3/31/2015 11:45 AM	Application extension	7,298 KB
SIPClientLIB.dll	11/10/2015 5:10 AM	Application extension	79 KB
TMAC_MemoryManager.dll	10/13/2015 12:01 ...	Application extension	6 KB
TpmsInterconnect.dll	3/12/2015 12:36 PM	Application extension	10 KB
tsinst32.dll	1/5/2011 4:24 AM	Application extension	356 KB
VoiceLibrary.dll	11/10/2015 10:53 ...	Application extension	100 KB
WebSockLib.dll	6/26/2015 12:31 PM	Application extension	45 KB
AMACWeb_Proxy	11/23/2015 5:20 PM	CONFIG File	12 KB
AMACWebServer_Self_Host.exe	11/4/2015 7:00 PM	CONFIG File	13 KB
AMACWebServerWin.exe	12/1/2015 4:08 PM	CONFIG File	13 KB
APP	11/5/2015 8:03 AM	CONFIG File	14 KB
Log4Net	11/4/2015 7:04 PM	CONFIG File	3 KB
TSLIB	11/4/2015 6:46 PM	Configuration settings	1 KB
configProvider	12/1/2015 4:10 PM	Text Document	1 KB
Facebook	6/26/2015 2:19 PM	XML File	104 KB

Below illustrates the configuration file '**AMACWebServerWin.exe.config**' where AES access is configured with the **aesUserName**/**aesPassword** and **aesLink** corresponding to **Section 6.1 Step 2** and **Section 6.4 Step 5** respectively. The **aesPassword** was not displayed for security reason.



```
<?xml version="1.0"?>
<configuration>

  <configSections>
    <sectionGroup name="applicationSettings" type="System.Configuration.ApplicationSettingsGroup, System,
      <section name="DataLibrary.Properties.Settings" type="System.Configuration.ClientSettingsSection, Sy
      <section name="AMACWeb_Proxy.Properties.Settings" type="System.Configuration.ClientSettingsSection,
      <section name="AMACWebCustomerLayer_Generic.Properties.Settings" type="System.Configuration.ClientSe
      <section name="MBS_AMAC_CustomerLayer.Properties.Settings" type="System.Configuration.ClientSettings
      <section name="AMACWebServerLogic.Properties.Settings" type="System.Configuration.ClientSettingsSect

    </sectionGroup>
  </configSections>

  <appSettings>

    <add key="aesUserName" value="Tetherfi"/>
    <add key="aesPassword" value="            "/>
    <add key="aesLink" value="AVAYA#DUPLEX#CSTA#AES6X"/>

    <add key="PollTime" value="6000"/>
    <add key="TransferAUXTime" value="60"/>
    <add key="HoldTime" value="10"/>
```

The **TSLIB** configuration settings file defined the AES IP address **10.1.10.70** and port **450** (defined in **Section 6.4 item 6)**.



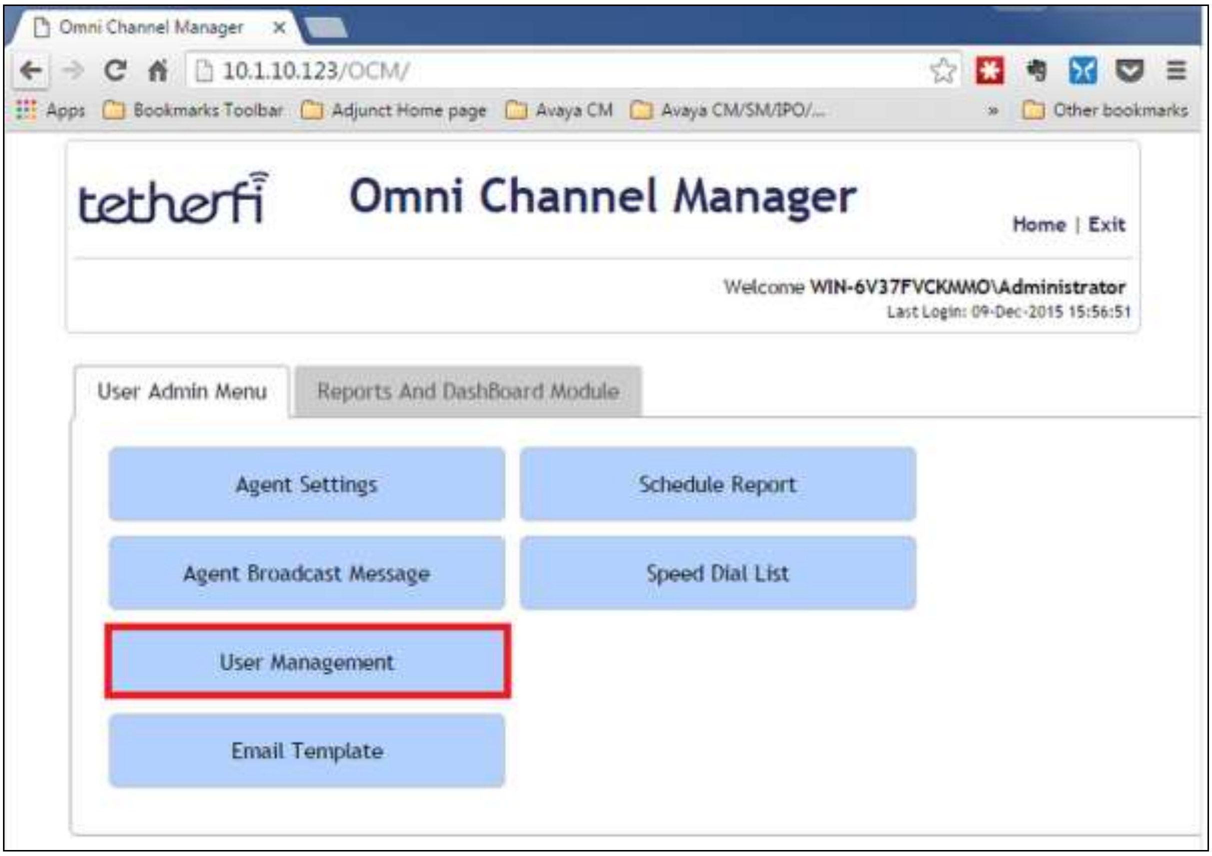
```
[Telephony Servers]
10.1.10.70=450
```

7.2. Configure Agents

Launch a web browser and enter **http://<IP address of OCM server>/OCM** to access the OCM for configuration of OCM Admin Users and TMAC Agents.

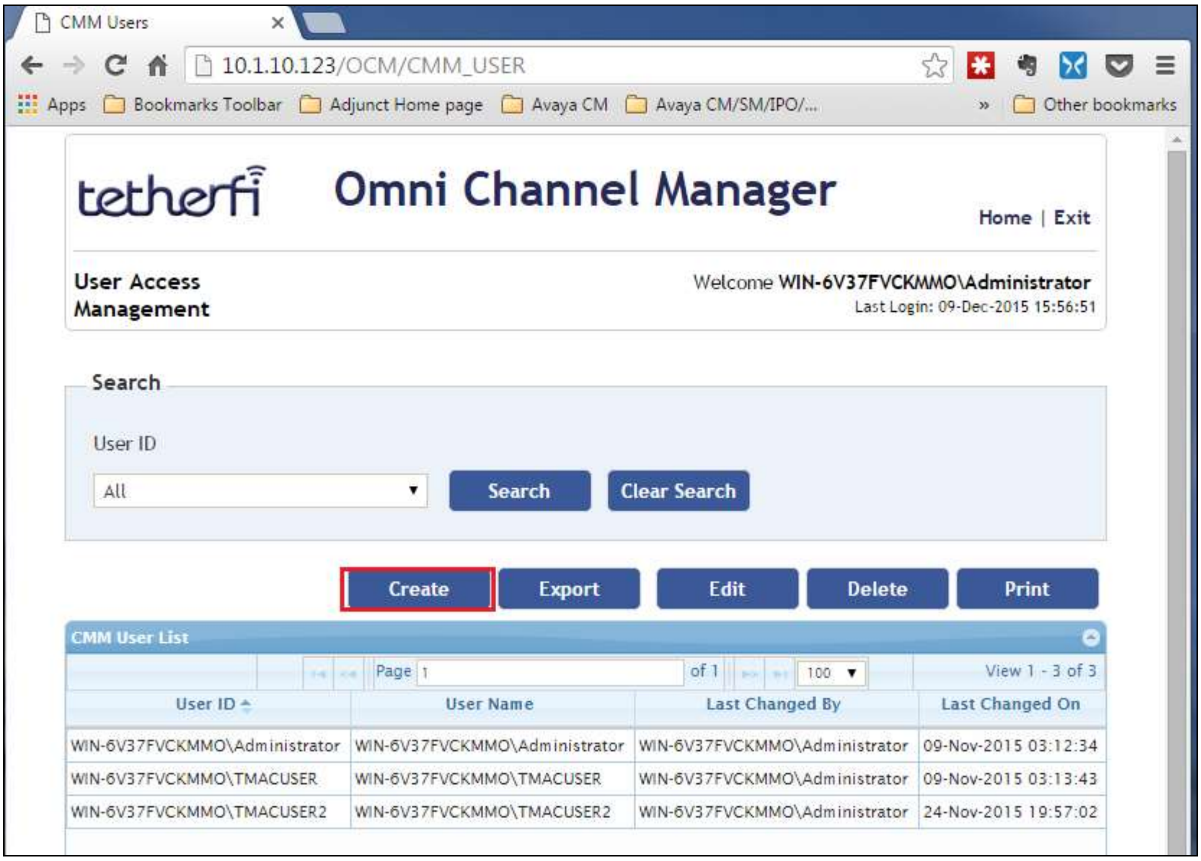
7.2.1. User creation

Assuming user accounts for agents are already created in the Windows Domain, click on the **User Management** to add agents.



Welcome WIN-6V37FVCKMMO\Administrator
Last Login: 09-Dec-2015 15:56:51

Below is a list of 'OCM Admin' users already created. To create new users, click on the **Create** soft button.



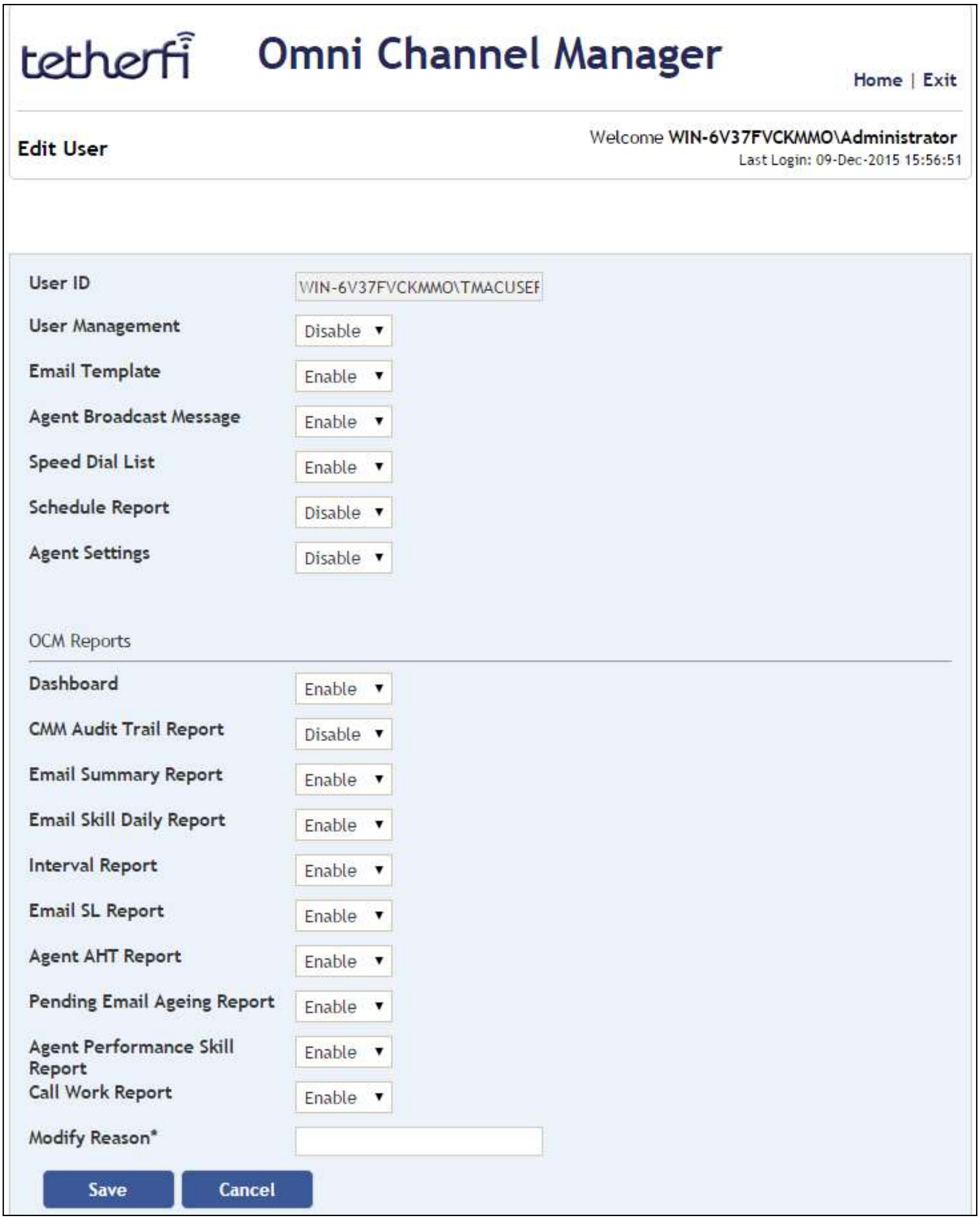
Welcome WIN-6V37FVCKMMO\Administrator
Last Login: 09-Dec-2015 15:56:51

User ID: All

Page 1 of 1 · 100 · View 1 - 3 of 3

User ID	User Name	Last Changed By	Last Changed On
WIN-6V37FVCKMMO\Administrator	WIN-6V37FVCKMMO\Administrator	WIN-6V37FVCKMMO\Administrator	09-Nov-2015 03:12:34
WIN-6V37FVCKMMO\TMACUSER	WIN-6V37FVCKMMO\TMACUSER	WIN-6V37FVCKMMO\Administrator	09-Nov-2015 03:13:43
WIN-6V37FVCKMMO\TMACUSER2	WIN-6V37FVCKMMO\TMACUSER2	WIN-6V37FVCKMMO\Administrator	24-Nov-2015 19:57:02

A sample of the agent created for TMACUSER account and its capabilities is illustrated below.



Edit User

Welcome **WIN-6V37FVCKMMO\Administrator**
Last Login: 09-Dec-2015 15:56:51

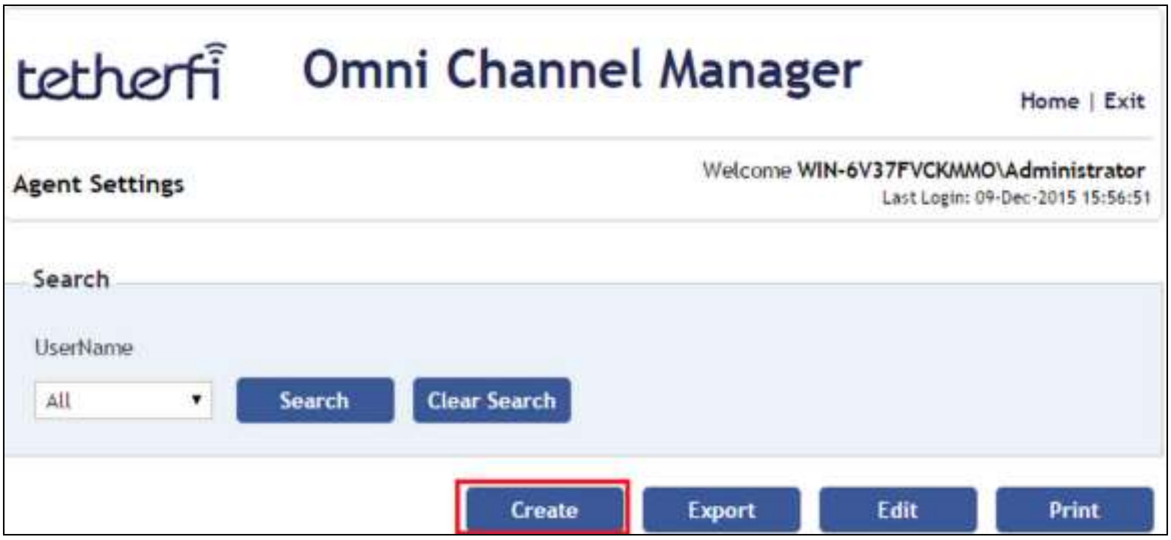
User ID	WIN-6V37FVCKMMO\TMACUSEF
User Management	Disable
Email Template	Enable
Agent Broadcast Message	Enable
Speed Dial List	Enable
Schedule Report	Disable
Agent Settings	Disable

OCM Reports

Dashboard	Enable
CMM Audit Trail Report	Disable
Email Summary Report	Enable
Email Skill Daily Report	Enable
Interval Report	Enable
Email SL Report	Enable
Agent AHT Report	Enable
Pending Email Ageing Report	Enable
Agent Performance Skill Report	Enable
Call Work Report	Enable
Modify Reason*	

7.2.2. Agent Settings

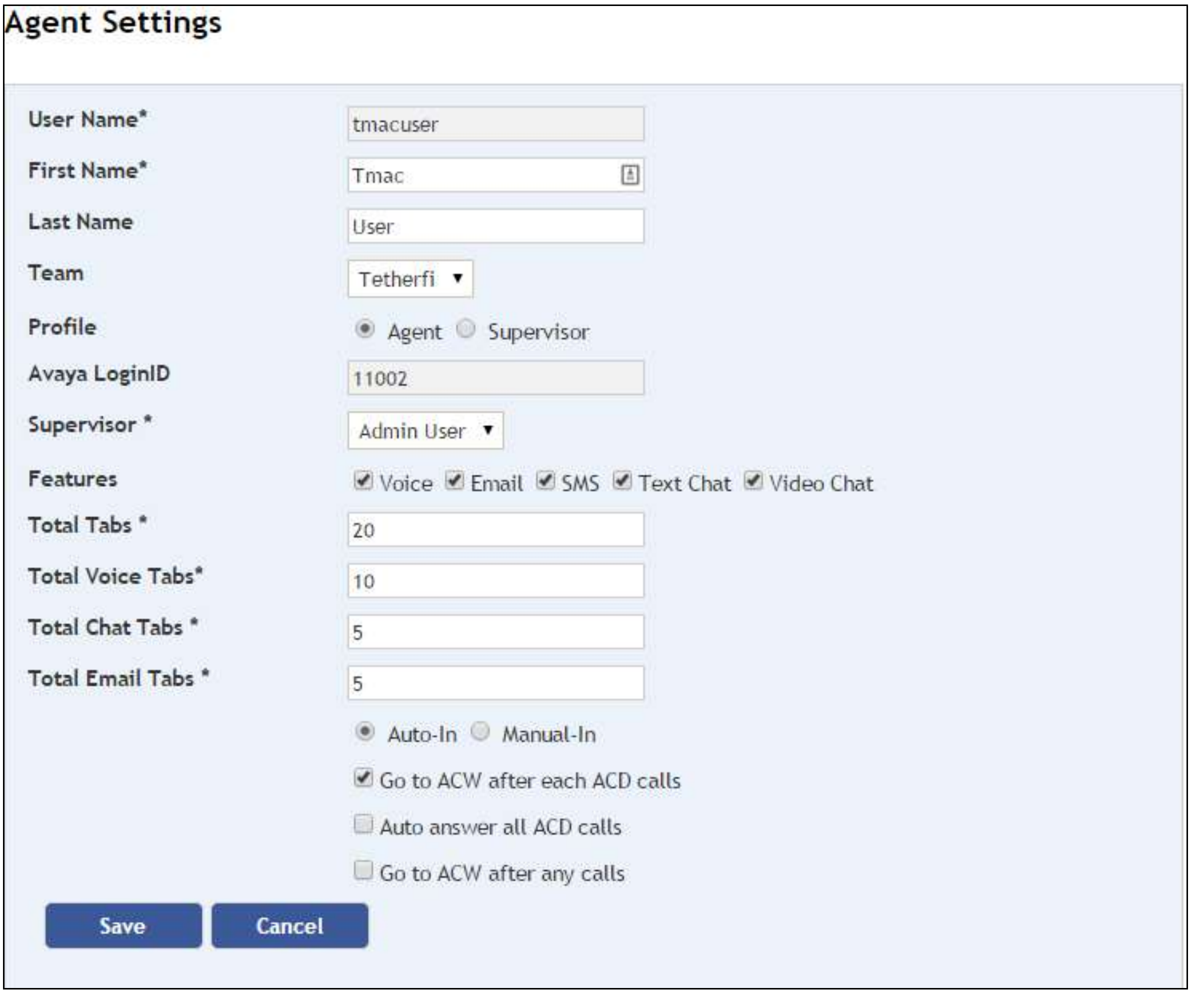
From the initial login screen or click on **Home** button on the top right; select **Agent Settings → Create**.



Configure the agent as below:

1. **User Name -** Enter user windows account name
2. **First Name -** Enter user first name
3. **Last Name** – Enter user last name
4. **Team** – Select team user is under
5. **Profile** – Select **Agent** or **Supervisor**
6. **Avaya LoginID** – Enter LoginID configured on Communication Manager
7. **Supervisor** – Select Supervisor user account
8. **Features** – Select features desired
9. **Total Tabs** – Enter total number of tabs for agent that include voice, chat and email
10. **Total Voice Tabs** – Enter number of Voice calls agent can handle
11. **Total Chat Tabs** – Enter number of Chats agent can handle
12. **Total Email Tabs** – Enter number of Emails agent can handle
13. **Auto-In/Manual-In** – Select agent be in Auto-In or Manual-In after login
14. **Auto answer all ACD calls** – Incoming calls will be auto-answered if selected
15. **Go to ACW after any calls** – As the name implies

The screenshot of a typical agent is illustrated on next page.



Agent Settings

User Name*	tmacuser
First Name*	Tmac
Last Name	User
Team	Tetherfi ▼
Profile	● Agent ○ Supervisor
Avaya LoginID	11002
Supervisor *	Admin User ▼
Features	☑ Voice ☑ Email ☑ SMS ☑ Text Chat ☑ Video Chat
Total Tabs *	20
Total Voice Tabs*	10
Total Chat Tabs *	5
Total Email Tabs *	5
	● Auto-In ○ Manual-In
	☑ Go to ACW after each ACD calls
	□ Auto answer all ACD calls
	□ Go to ACW after any calls

8. Verification Steps

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

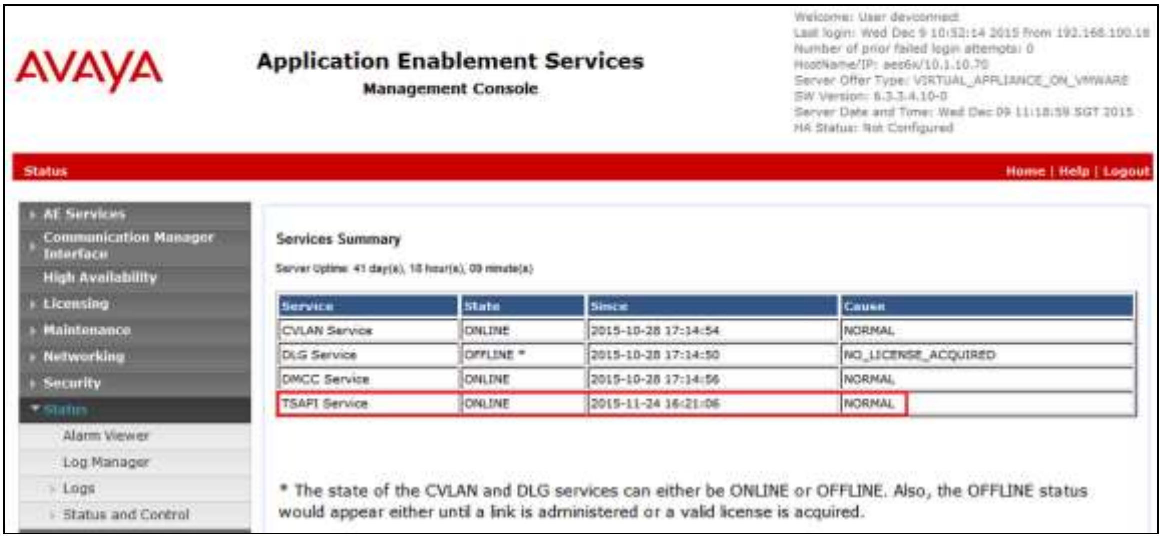
8.1. Verify Avaya Communication Manager

Verify the status of the administered TSAPI CTI link by using the **status aesvcs cti-link** command. The **Service State** field should display **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
2              no                     down          0        0
3     7        no    aes6x            established   861      861
```

8.2. Verify Avaya Application Enablement Services

From the Welcome to OAM web pages, verify the status of the TSAPI Service by selecting **Status**. The **State** field for the **TSAPI Service** should display **ONLINE**.



Welcome: User devconnect
Last login: Wed Dec 9 10:52:14 2015 from 192.168.100.18
Number of prior failed login attempts: 0
HostName/IP: aes6x/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 6.3.3.4.10-0
Server Date and Time: Wed Dec 09 11:18:59 SGT 2015
HA Status: Not Configured

Services Summary

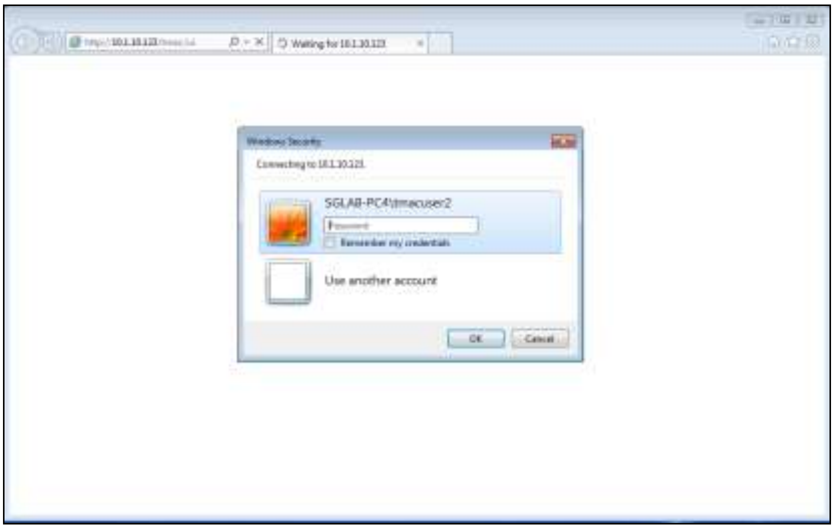
Server Uptime: 41 day(s), 18 hour(s), 09 minute(s)

Service	State	Since	Cause
CVLAN Service	ONLINE	2015-10-28 17:14:54	NORMAL
DLG Service	OFFLINE *	2015-10-28 17:14:50	NO_LICENSE_ACQUIRED
DMCC Service	ONLINE	2015-10-28 17:14:56	NORMAL
TSAPI Service	ONLINE	2015-11-24 16:21:06	NORMAL

* The state of the CVLAN and DLG services can either be ONLINE or OFFLINE. Also, the OFFLINE status would appear either until a link is administered or a valid license is acquired.

8.3. Verify Tetherfi Multimedia Agent Client

Launch a web browser on the agent PC and enter address **http://<IP address of OCM>/tmac/ui** to access the TMAC. Log in to an agent user account in **password** box.



Windows Security

Connecting to 10.1.10.121

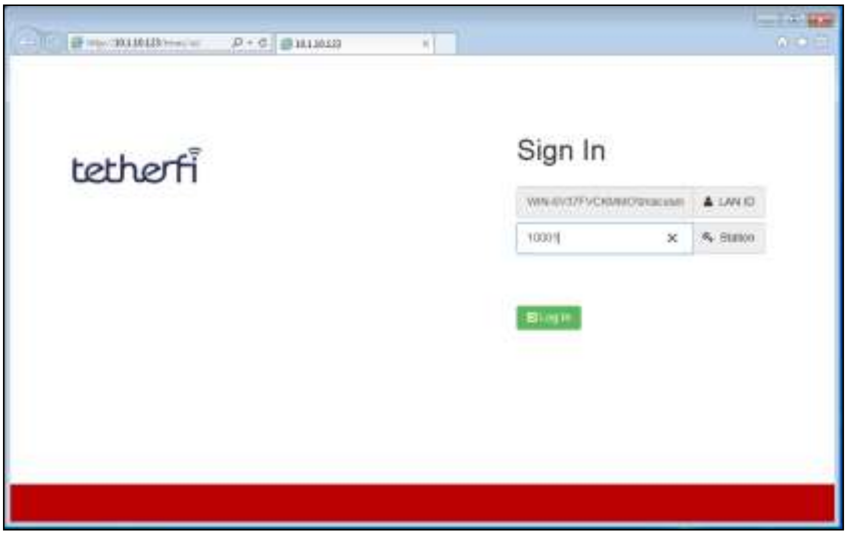
SGLAB-PC4\tmacuser2

Password

☐ Remember my credentials

Use another account

On the next screen that pop-up, enter an available station number as below and in this case **10001**.

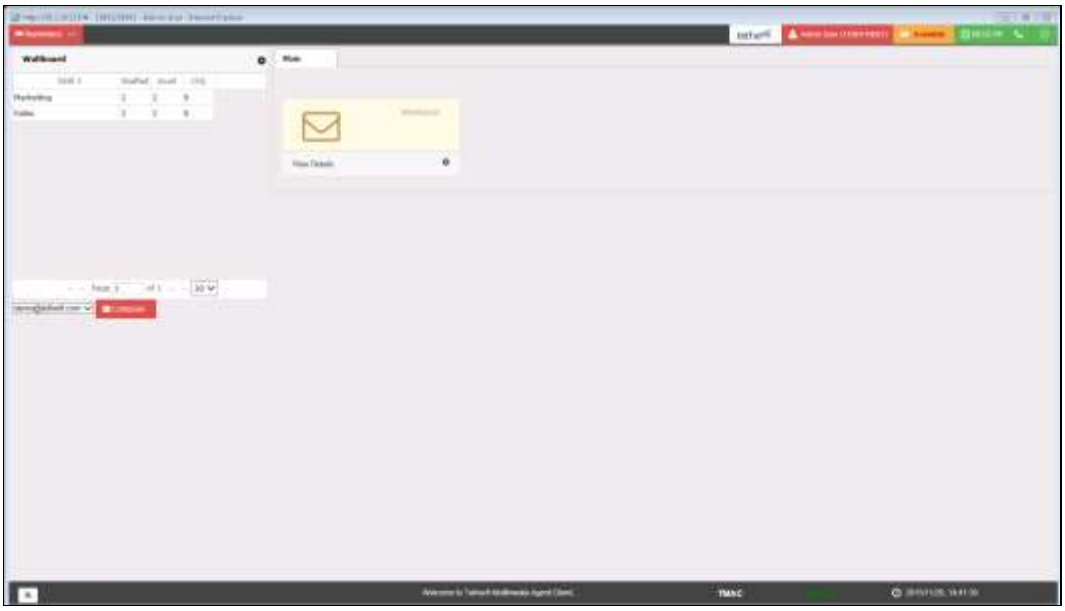


Sign In

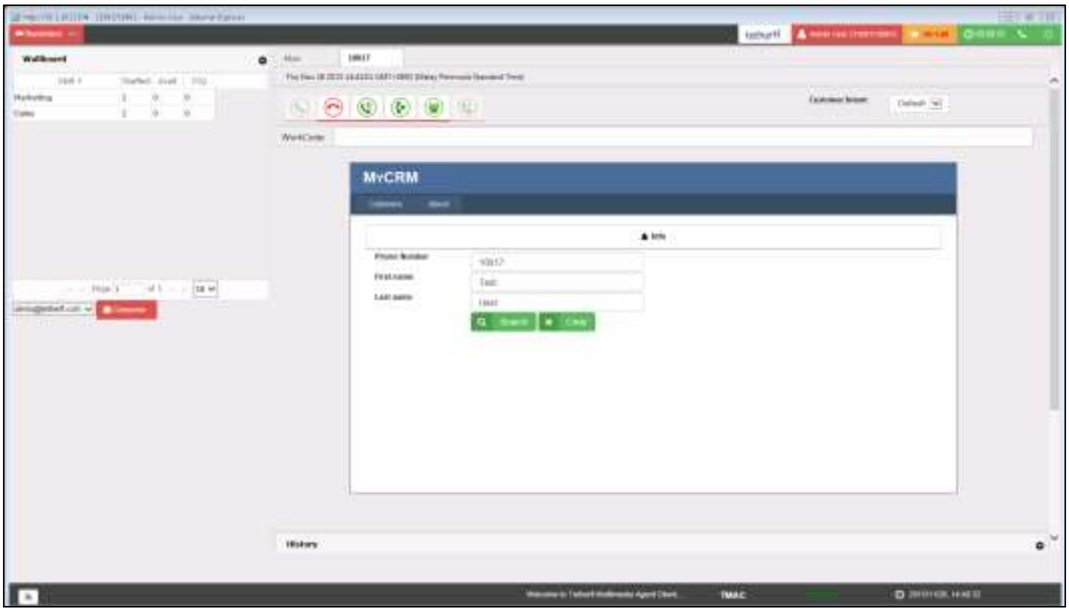
WIN-6V37FVCKMMO\tmacuser — LAN ID

10001 — Station

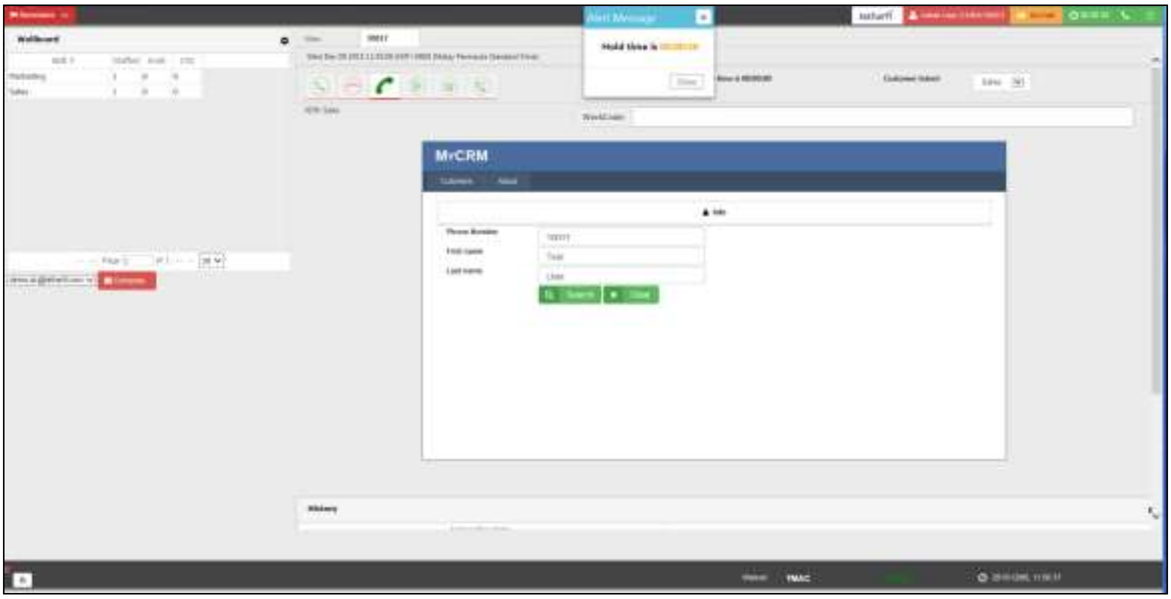
The agent will be in **default** mode. Change the agent to **Available** mode by clicking on the mode and select (not shown). The agent login station **10001** and loginID **11001** is also displayed. Skills assigned to agent are shown on left **Wallboard** along with the real-time queue status.



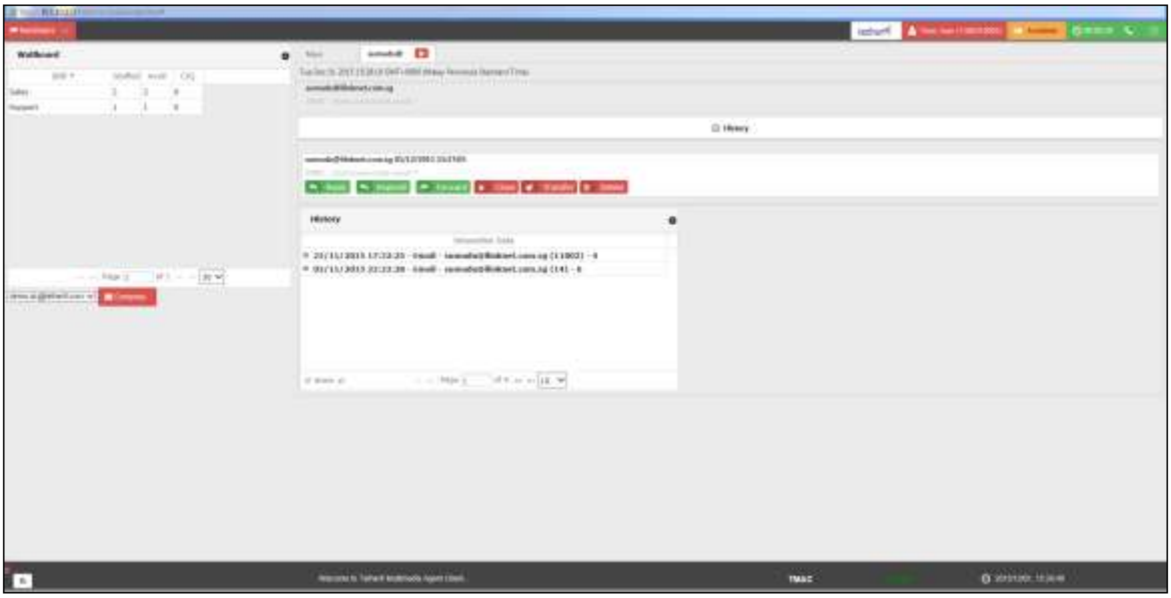
Make an incoming call to the agent. Verify the agent desktop is now highlighted with call control functionality (onhook, call hold, consult transfer and conference) visible at the top middle of the interface. The **ANI** details is presented and the **On Call** mode is displayed on the top right bar. Verify also on the same place that the **Duration** timer is counting.



Put the call on hold by pressing the **Hold** soft button. Verify the green **Unhold** soft button is displayed and the **Hold** timer is counting.



Send an email to the OCM and verify that the appropriate agent with the relevant skill for handling that email is able to see it and handle it.



9. Conclusion

These Application Notes describe the configuration steps required for Tetherfi Multimedia Client to interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services using the Telephony Services Application Programming Interface (TSAPI). All feature test cases were completed successfully.

10. Additional References

This section references the Avaya and Tetherfi documentations that are relevant to these Application Notes.

The following Avaya product documentations can be found at http://support.avaya.com.
[1] *Avaya Aura® Application Enablement Services Administration and Maintenance Guide*, Document Number 02—300357, Release 6.3, Jun 2014.
[2] *Avaya Aura® Avaya Communication Manager Feature Description and Implementation*, Document Number 555-245-205, Issue 12, Jun 2015.

Tetherfi product documentations can be obtained from Interlink Network Systems.

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.