DevConnect Program

Application Notes for Cyara Platform Virtual Agent 23.11 with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Cyara Platform Virtual Agent 23.11 to interoperate with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1.

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 Avaya DevConnect Program.

1. Introduction

These Application Notes describe the configuration steps required for Cyara Platform Virtual Agent 23.11 to interoperate with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services (AES) 10.1. Cyara Plaftorm Virtual Agent registered to Avaya Aura® Communication Manager through Cyara Virtual Endpoint that use H.323 Endpoint emulation, covered in Application Notes reference [**4**].

The Cyara Platform is an automated testing product and services platform that provides scripting, reporting, administration, collaboration, and management portal for contact center testing. The Cyara Platform Virtual Agent Service is one of the components of the Cyara Platform that interacts with AES via Telephony Services Application Programming Interface (TSAPI) to automate agent activities in order to simulate contact center operations. Cyara Platform Virtual Agent Service logs the required agents into the call center and performs the activities specified by the designated behaviors assigned to the agents. The Cyara Virtual Agent also interfaces with the Cyara Database and Web Portal.

2. General Test Approach and Test Results

The feature test cases were performed manually. Campaigns are run from the Cyara Web Portal to handle inbound calls routed to the Virtual Agent. In this testing, voice calls are answered by Virtual Endpoints registered to Communication Manager as generic H.323 endpoints, which are covered in Application Notes reference [**4**].

The serviceability test cases were also performed manually by restarting the Telephony Services Application Programming Interface (TSAPI) service on AES as well as the CTI link on Communication Manager. It also includes disrupting the ethernet connectivity to the Cyara Platform server.

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 these DevConnect Application Notes 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 systems and the Cyara Platform did not include use of any specific encryption features as requested by Cyara.

This test was conducted in a lab environment simulating a basic customer enterprise network environment. The testing focused on the standards-based interface between the Avaya solution and the third party solution. The results of testing are therefore considered to be applicable to either a premise-based deployment or to a hosted or cloud deployment where some elements of the third party solution may reside beyond the boundaries of the enterprise network, or at a different physical location from the Avaya components.

Readers should be aware that network behaviors (e.g., jitter, packet loss, delay, speed, etc.) can vary significantly from one location to another, and may affect the reliability or performance of the overall solution. Different network elements (e.g., session border controllers, soft switches, firewalls, NAT appliances, etc.) can also affect how the solution performs.

If a customer is considering implementation of this solution in a cloud environment, the customer should evaluate and discuss the network characteristics with their cloud service provider and network organizations, and evaluate if the solution is viable to be deployed in the cloud.

The network characteristics required to support this solution are outside the scope of these Application Notes. Readers should consult the appropriate Avaya and third party documentation for the product network requirements. Avaya makes no guarantee that this solution will work in all potential deployment configurations.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying Cyara Virtual Agent, including the following:

- Agent in login mode and logout scenarios.
- Agent work mode changes and reason codes.
- Handling of incoming ACD calls.
- Holding and resuming calls.
- Consult and single step transfers including cancellation.
- Consult conference including cancellation.
- Correct status of agent reflected on the test user interface.
- Proper termination of calls including call hold, transfer and conference.

The serviceability testing focused on verifying the ability of Cyara Virtual Agent to recover from adverse conditions such as restarting of the TSAPI service on Avaya AES and CTI link on the Communication Manager. It also includes disrupting the ethernet connectivity to the Cyara Platform server.

2.2. Test Results

All feature test cases were successfully completed.

2.3. Support

Technical support on Cyara Platform can be obtained through the following:

- Phone: +61-3-9093-0815 (Australia), +44-203-786-5070 (Europe/Middle East/Africa), +1-650-549-8522 (North America/Latin America)
- Email: support@cyara.com
- Web: http://support.cyara.com/

3. Reference Configuration

An on-premises solution is conducted in this compliance testing. **Figure 1** illustrates a sample configuration consisting of Communication Manager, Avaya G430 Media Gateway, AES, Avaya Media Server, Session Manager and Avaya Aura® System Manager. System Manager is the administration and management tool for Avaya Aura® products. Avaya Workplace Client, Avaya Communicator and Avaya Agent for Desktop are used as utility softphones for initiating calls. Cyara Platform Server communicates with TSAPI Service on Avaya AES. Microsoft SQL 2017 was installed as the database server. Cyara Virtual Endpoint server provides the virtual H.323 endpoints which are detailed in another Application Notes reference [**4**]. A personal computer was used for Cyara Web Portal access. A SIP Trunk is configured between Session Manager and Cyara to allow outbound call to be made. Avaya Session Border Controller was used to complete a SIP trunk connection to simulate a PSTN connection to the Enterprise solution.

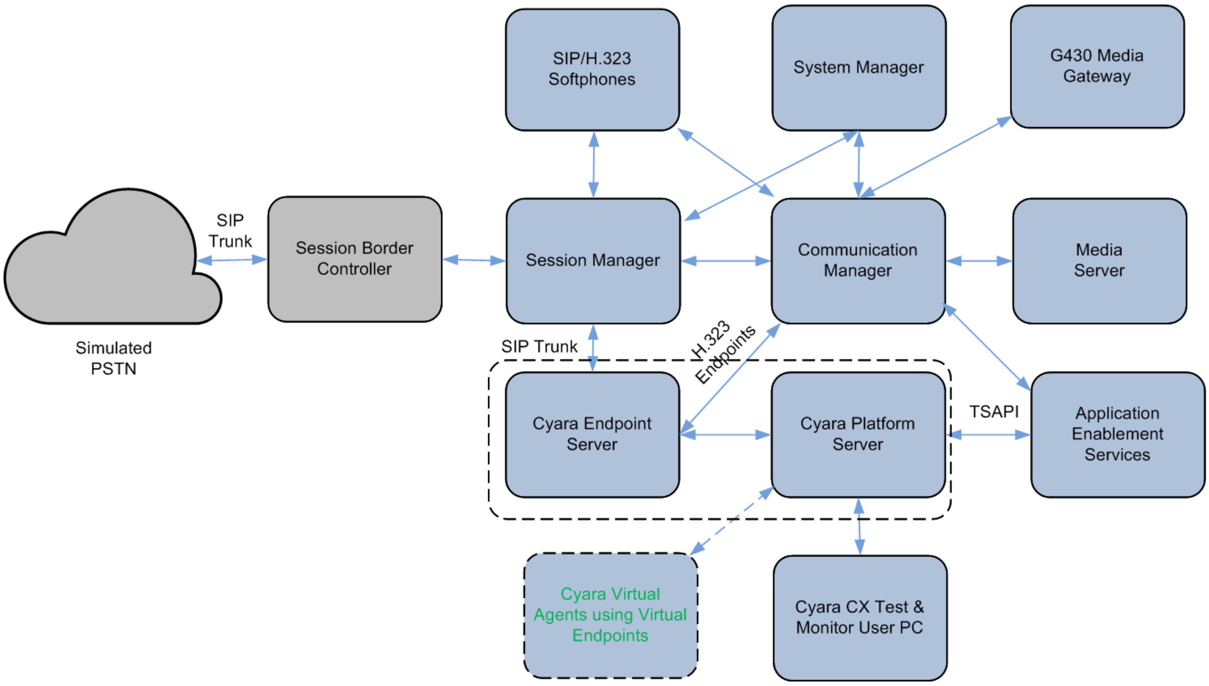


Figure 1: Test Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Session Border Controller	10.1.0.0-32-21432
Avaya Aura® Communication Manager	10.1.3.1.0.974.27937
Avaya G430 Media Gateway	42.22.0
Avaya Aura® Application Enablement Services	10.1.3.1.0.49-0
Avaya Aura® Media Server	10.1.0.154
Avaya Aura® System Manager	System Manager 10.1 Build 10.1.0.0.537353 Feature Pack 3 Service Pack 1 Latest Build 10.1.3.1.0716418
Avaya Aura® Session Manager	10.1.3.1.1013103 patch 91698
Avaya Workplace Client (SIP)	3.34.1
Avaya Communicator (H.323/SIP)	6.2.14.4-SP14
Cyara Platform running on Windows Server with Microsoft SQL TSAPI Client	23.11.1.2 Microsoft Windows 2019 Microsoft SQL 2019 10.1.3.1
Cyara Endpoint Server running on Windows Server	23.11.1.2 Microsoft Windows 2019

5. Configure Avaya Aura® Communication Manager

This section provides the procedure for configuring Communication Manager. The procedure includes the following areas.

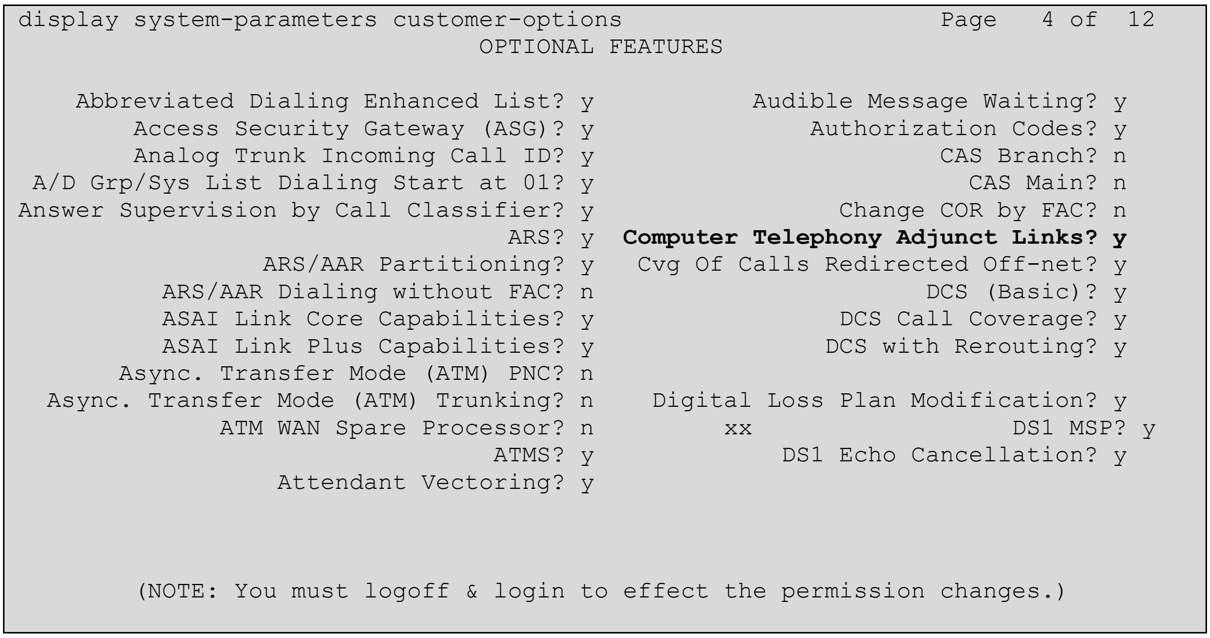
- Verify license
- Administer CTI link
- Configure agent IDs

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

Setup of VDNs, Hunt Groups and Trunks are assumed to be configured and will not be detailed here. Setup of virtual stations registered to Communication Manager as generic H.323 endpoints will be covered in Application Notes reference [**4**].

5.1. Verify License

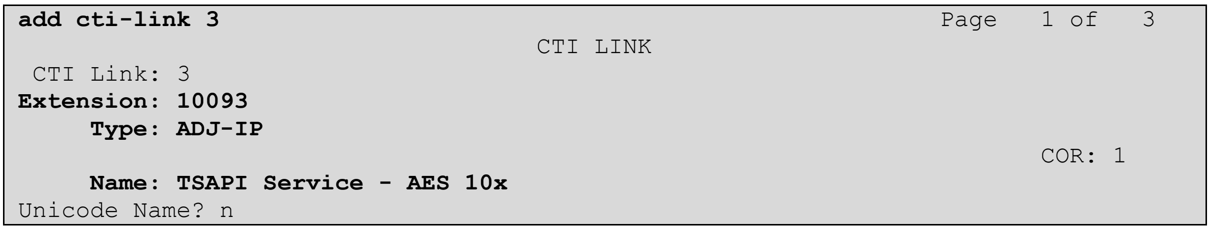
Enter the **display system-parameters customer-options** command. On **Page 4**, verify that **Computer Telephony Adjunct Links** is set to **y**. If not, contact an authorized Avaya account representative to obtain the license.



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

    Abbreviated Dialing Enhanced List? y           Audible Message Waiting? y
        Access Security Gateway (ASG)? y               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         xx                  DS1 MSP? y
                                 ATMS? y             DS1 Echo Cancellation? y
                  Attendant Vectoring? y



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

5.2. Administer CTI Link

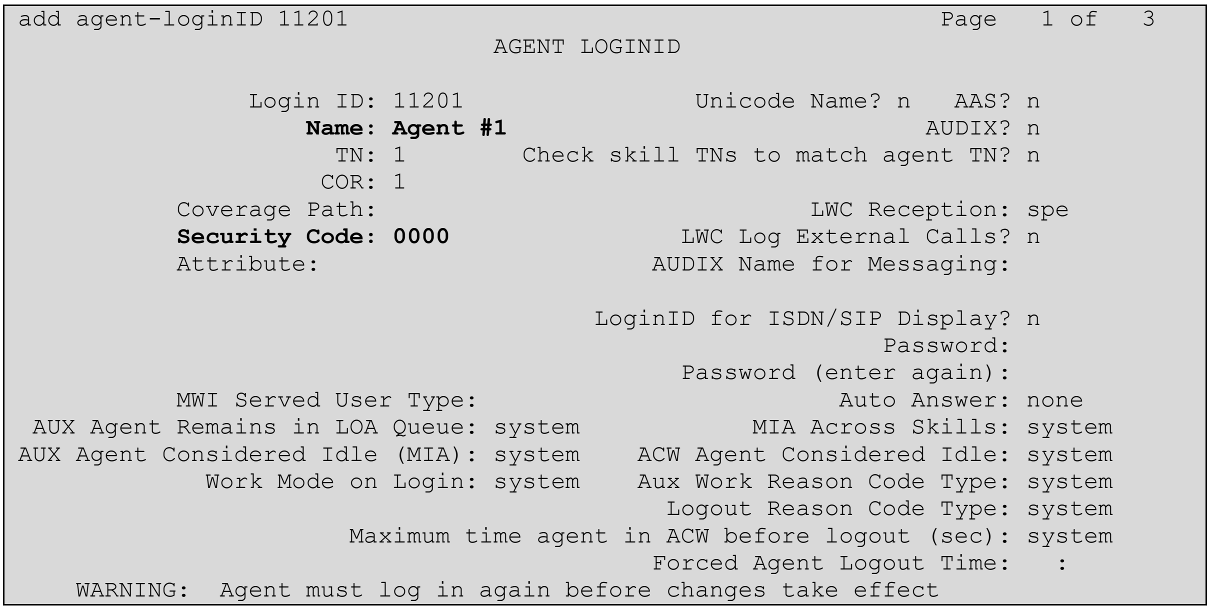
Enter the **add cti-link m** command, where **m** is a number between 1 and 64, inclusive. Enter a valid **Extension** under the provisioned dial plan in Communication Manager, set the **Type** field to **ADJ-IP**, and assign a descriptive **Name** to the CTI link.



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

     Name: TSAPI Service - AES 10x
Unicode Name? n
```

5.3. Configure Agent IDs

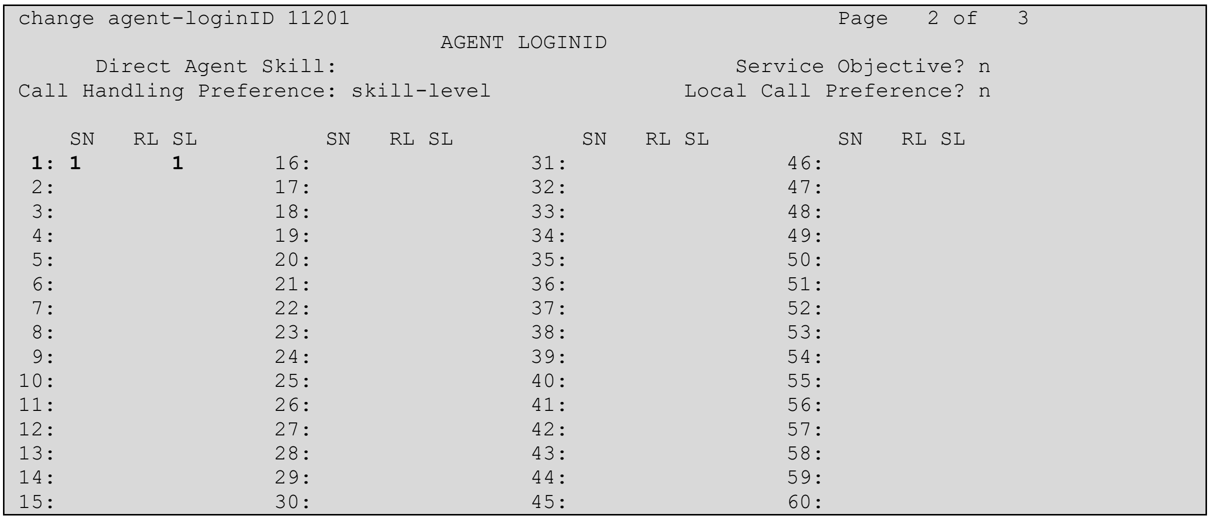
Enter the **add agent-loginID x** command where **x** is a valid agent login ID. On **Page 1**, enter an appropriate **Name** and configure the **Security Code** to desired value.



```
add agent-loginID 11201                                         Page   1 of   3
                                 AGENT LOGINID

                Login ID: 11201                Unicode Name? n   AAS? n
                    Name: Agent #1                             AUDIX? n
                      TN: 1        Check skill TNs to match agent TN? n
                     COR: 1
           Coverage Path:                              LWC Reception: spe
           Security Code: 0000                LWC Log External Calls? n
           Attribute:                       AUDIX Name for Messaging:

                                        LoginID for ISDN/SIP Display? n
                                                            Password:
                                              Password (enter again):
           MWI Served User Type:                         Auto Answer: none
 AUX Agent Remains in LOA Queue: system            MIA Across Skills: system
AUX Agent Considered Idle (MIA): system    ACW Agent Considered Idle: system
             Work Mode on Login: 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
```

On **Page 2**, configure appropriate Skill **SN** and Skill Level **SL** for testing purpose. Repeat to configure the rest of the agent login IDs required.

In this testing, agent login ID **11201** to **11210** were created which will logon using Virtual Endpoints **10401** to **10410** which are generic H.323 stations where configurations are covered in Application Notes reference [**4**].



```
change agent-loginID 11201                                      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: 1       1       16:                 31:                 46:
 2:                 17:                 32:                 47:
 3:                 18:                 33:                 48:
 4:                 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:
```

6. Configure Avaya Aura® Application Enablement Services

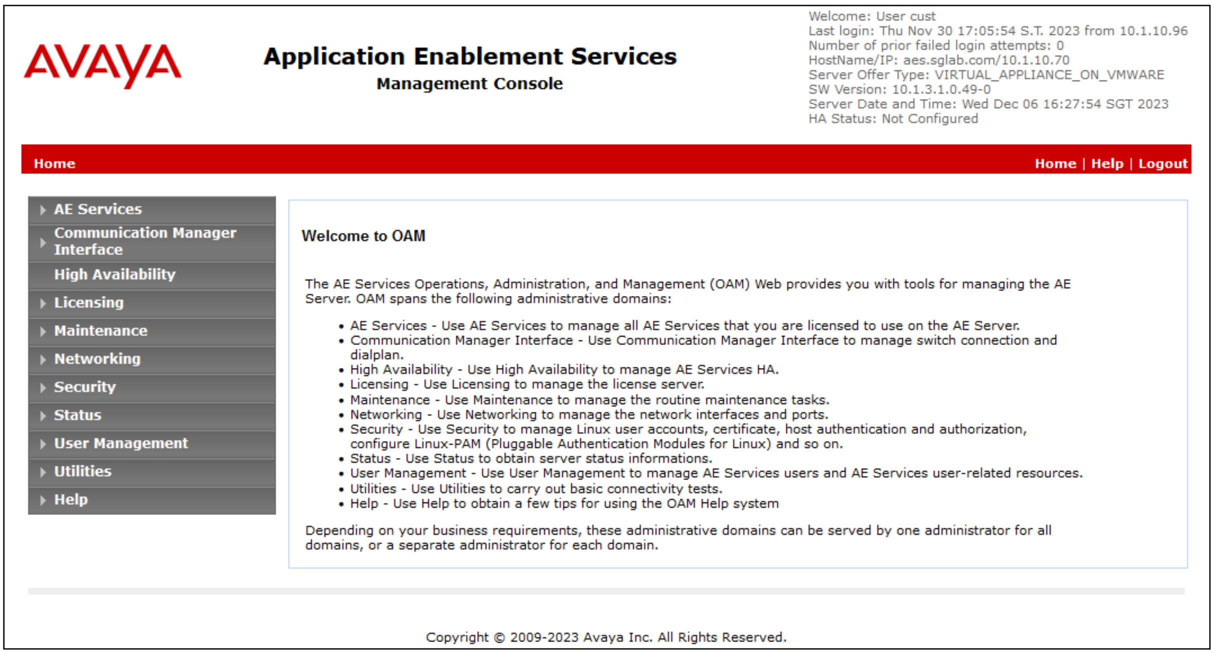
This section provides the procedure for configuring AES. The procedures fall into the following areas:

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

6.1. Launch OAM Interface

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 cust
Last login: Thu Nov 30 17:05:54 S.T. 2023 from 10.1.10.96
Number of prior failed login attempts: 0
HostName/IP: aes.sglab.com/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 10.1.3.1.0.49-0
Server Date and Time: Wed Dec 06 16:27:54 SGT 2023
HA Status: Not Configured

Welcome to OAM

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

- AE Services - Use AE Services to manage all AE Services that you are licensed to use on the AE Server.
- Communication Manager Interface - Use Communication Manager Interface to manage switch connection and dialplan.
- High Availability - Use High Availability to manage AE Services HA.
- Licensing - Use Licensing to manage the license server.
- Maintenance - Use Maintenance to manage the routine maintenance tasks.
- Networking - Use Networking to manage the network interfaces and ports.
- Security - Use Security to manage Linux user accounts, certificate, host authentication and authorization, configure Linux-PAM (Pluggable Authentication Modules for Linux) and so on.
- Status - Use Status to obtain server status 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.

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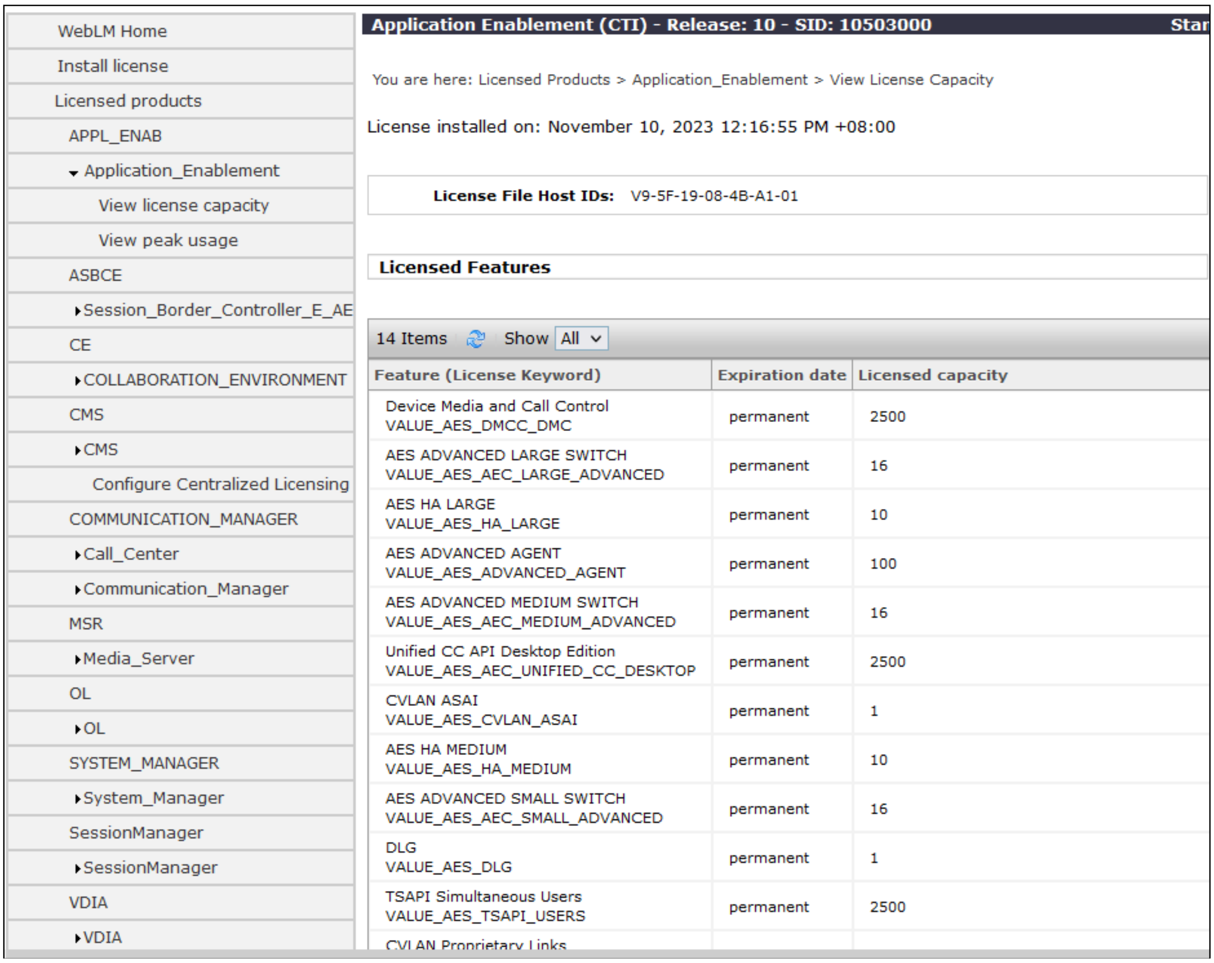
6.2. Verify License

Access the Web License Manager used by the AES server. The **Web License Manager** screen below is displayed. Select **Licensed products → APPL_ENAB → Application_Enablement** in the left pane, to display the **Licensed Features** screen in the right pane. Verify that there are sufficient licenses for **TSAPI Simultaneous Users**, as shown below. If not, consult with your Avaya Account Manager or Business Partner to acquire the proper license for your solution.



Application Enablement (CTI) - Release: 10 - SID: 10503000

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

License installed on: November 10, 2023 12:16:55 PM +08:00

License File Host IDs: V9-5F-19-08-4B-A1-01

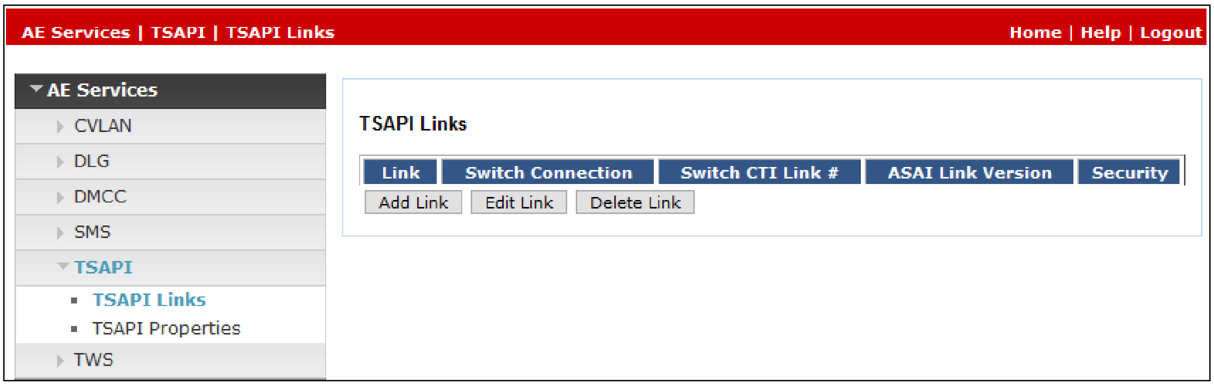
Licensed Features

14 Items Show All

Feature (License Keyword)	Expiration date	Licensed capacity
Device Media and Call Control VALUE_AES_DMCC_DMC	permanent	2500
AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED	permanent	16
AES HA LARGE VALUE_AES_HA_LARGE	permanent	10
AES ADVANCED AGENT VALUE_AES_ADVANCED_AGENT	permanent	100
AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED	permanent	16
Unified CC API Desktop Edition VALUE_AES_AEC_UNIFIED_CC_DESKTOP	permanent	2500
CVLAN ASAI VALUE_AES_CVLAN_ASAI	permanent	1
AES HA MEDIUM VALUE_AES_HA_MEDIUM	permanent	10
AES ADVANCED SMALL SWITCH VALUE_AES_AEC_SMALL_ADVANCED	permanent	16
DLG VALUE_AES_DLG	permanent	1
TSAPI Simultaneous Users VALUE_AES_TSAPI_USERS	permanent	2500
CVLAN Proprietary Links		

6.3. Administer TSAPI Link

To administer a TSAPI link on AES, select **AE Services → TSAPI → TSAPI Links**. Click **Add Link**.

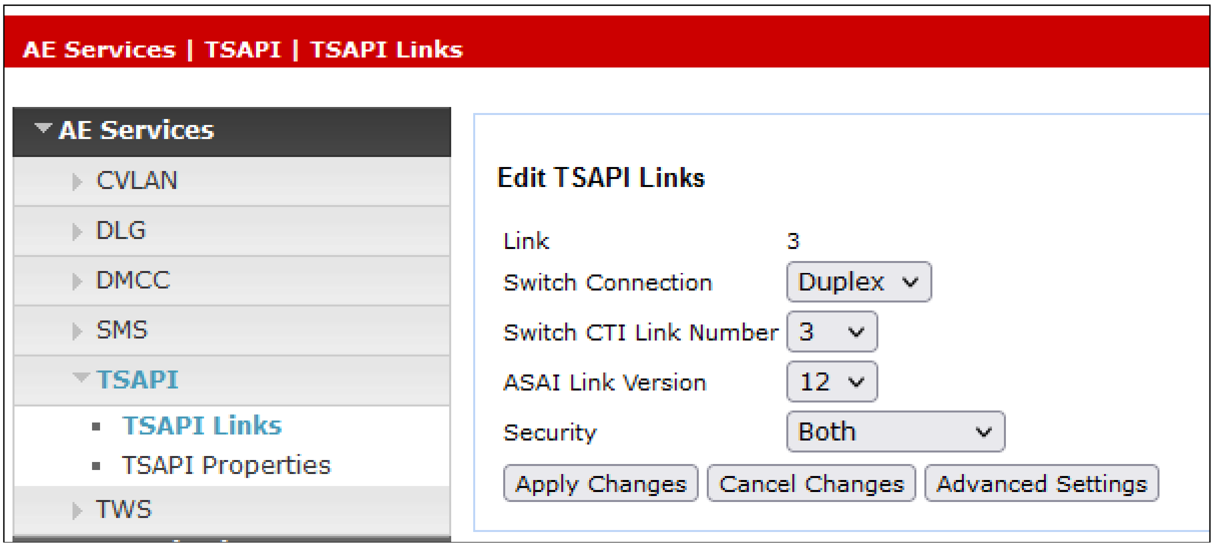


In the **Add TSAPI Links** screen (not shown), select the following values:

- **Link** Select an available Link number from 1 to 16.
- **Switch Connection** Select appropriate switch connection.
- **Switch CTI Link Number** Corresponding CTI link number in **Section 5.2**.
- **ASAI Link Version** Set to the latest version.
- **Security** Select **Both** to allow for encrypted or unencrypted link. For this compliance test, an unencrypted link was used.

Click **Apply Changes**.

The screenshot below shows the settings after changes are applied.



Edit TSAPI Links

Link 3

Switch Connection Duplex

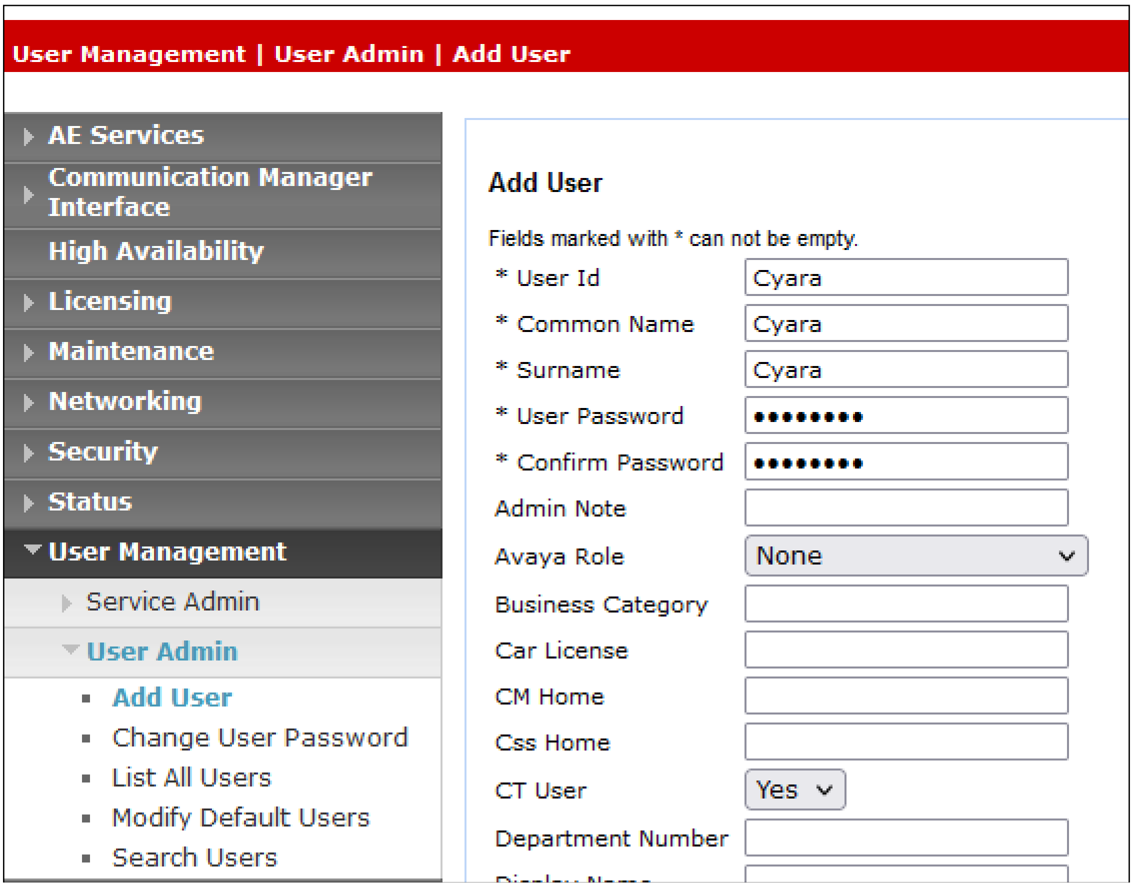
Switch CTI Link Number 3

ASAI Link Version 12

Security Both

6.4. Administer Cyara User

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 Cyara Platform in **Section 7** to access the TSAPI Service on AES. Scroll down to the bottom of the page and click **Apply** (not shown).



Add User

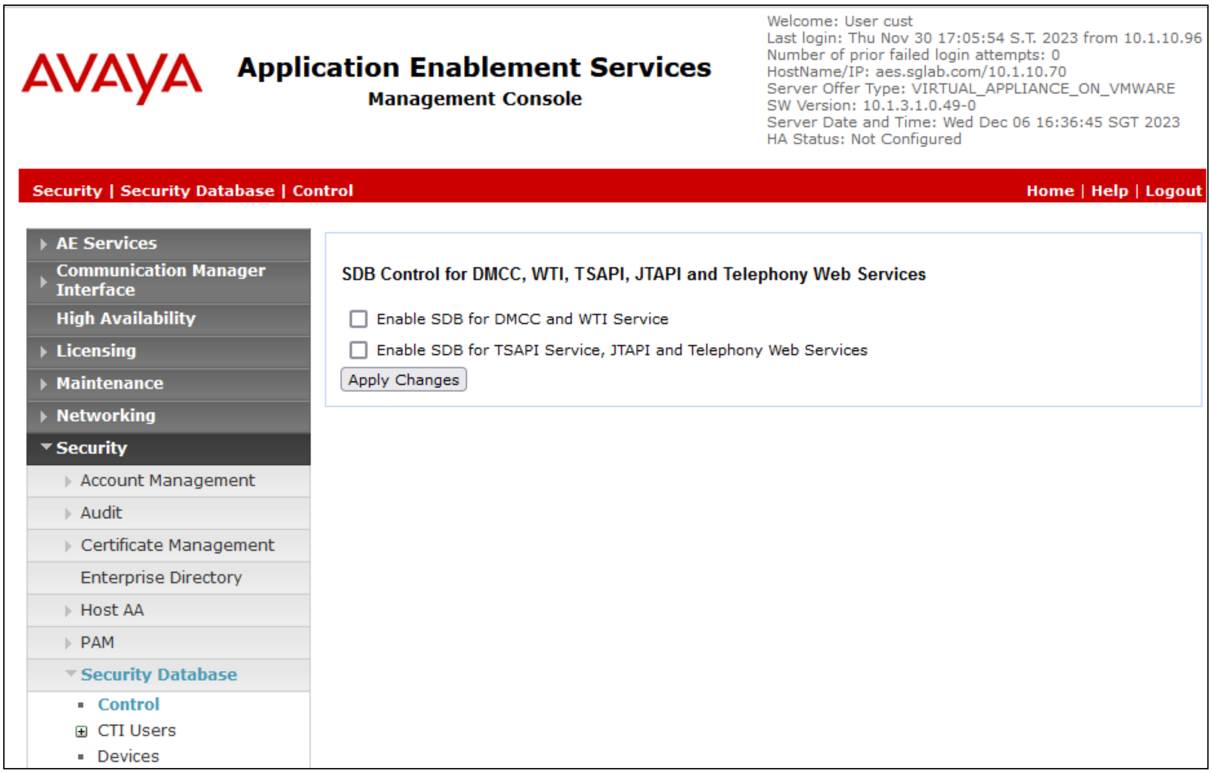
Fields marked with * can not be empty.

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

6.5. Verify Security Database

Select **Security → Security Database → Control** from the left pane, to display the **SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services** screen in the right pane. Make certain both parameters are unchecked, as shown below.

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



Welcome: User cust
Last login: Thu Nov 30 17:05:54 S.T. 2023 from 10.1.10.96
Number of prior failed login attempts: 0
HostName/IP: aes.sglab.com/10.1.10.70
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 10.1.3.1.0.49-0
Server Date and Time: Wed Dec 06 16:36:45 SGT 2023
HA Status: Not Configured

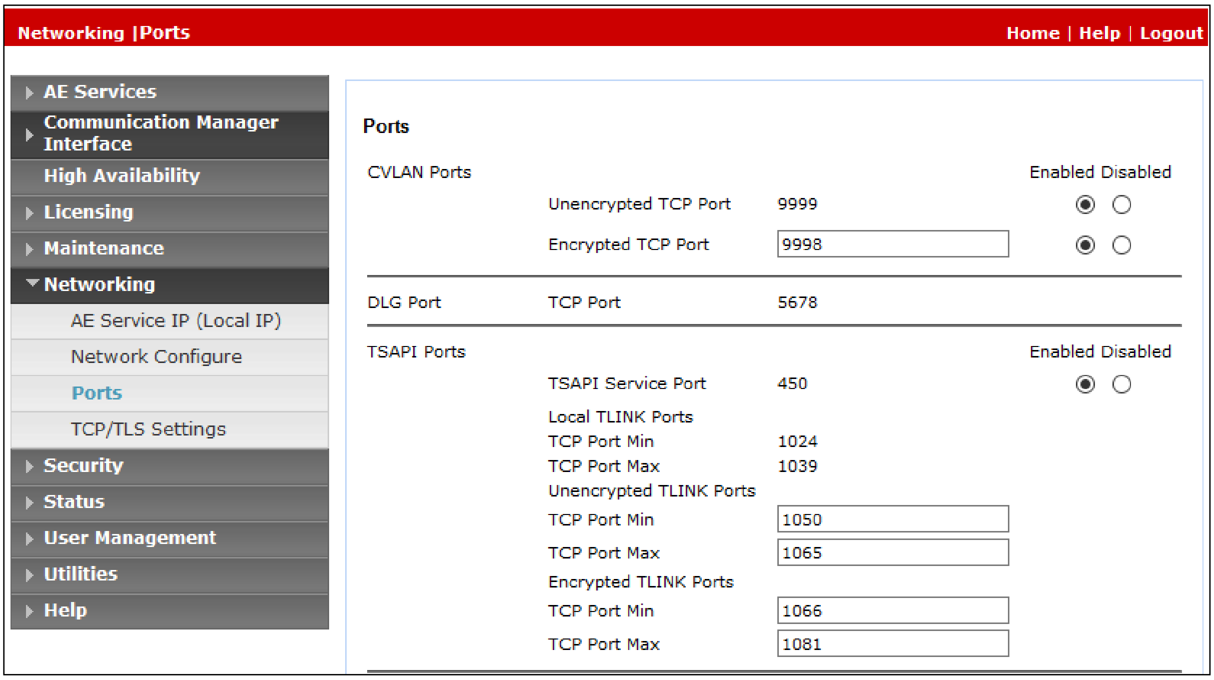
SDB Control for DMCC, WTI, TSAPI, JTAPI and Telephony Web Services

□ Enable SDB for DMCC and WTI Service

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

6.6. Administer TSAPI Ports

Navigate to the networking ports by **Networking → Ports**. Verify that the default **TSAPI Service Port 450** is **Enabled**.

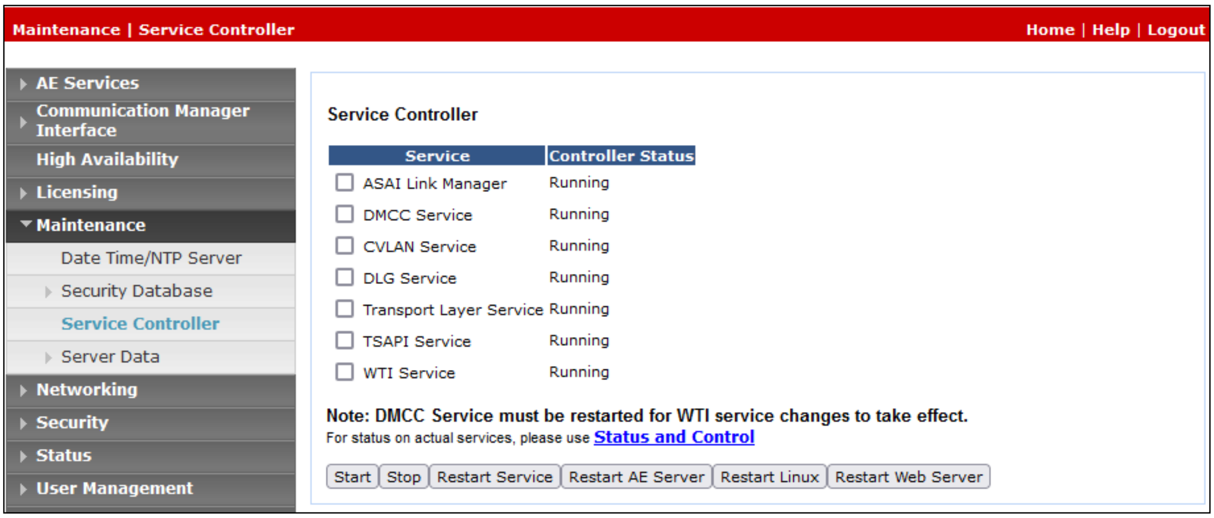


Ports

			Enabled	Disabled
CVLAN Ports				
	Unencrypted TCP Port	9999	●	○
	Encrypted TCP Port	9998	●	○
DLG Port	TCP Port	5678		
TSAPI Ports				
	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		

6.7. Restart TSAPI Service

To restart the TSAPI service, select **Maintenance → Service Controller** from the Home menu. Check the **TSAPI Service** checkbox and click **Restart Service**.



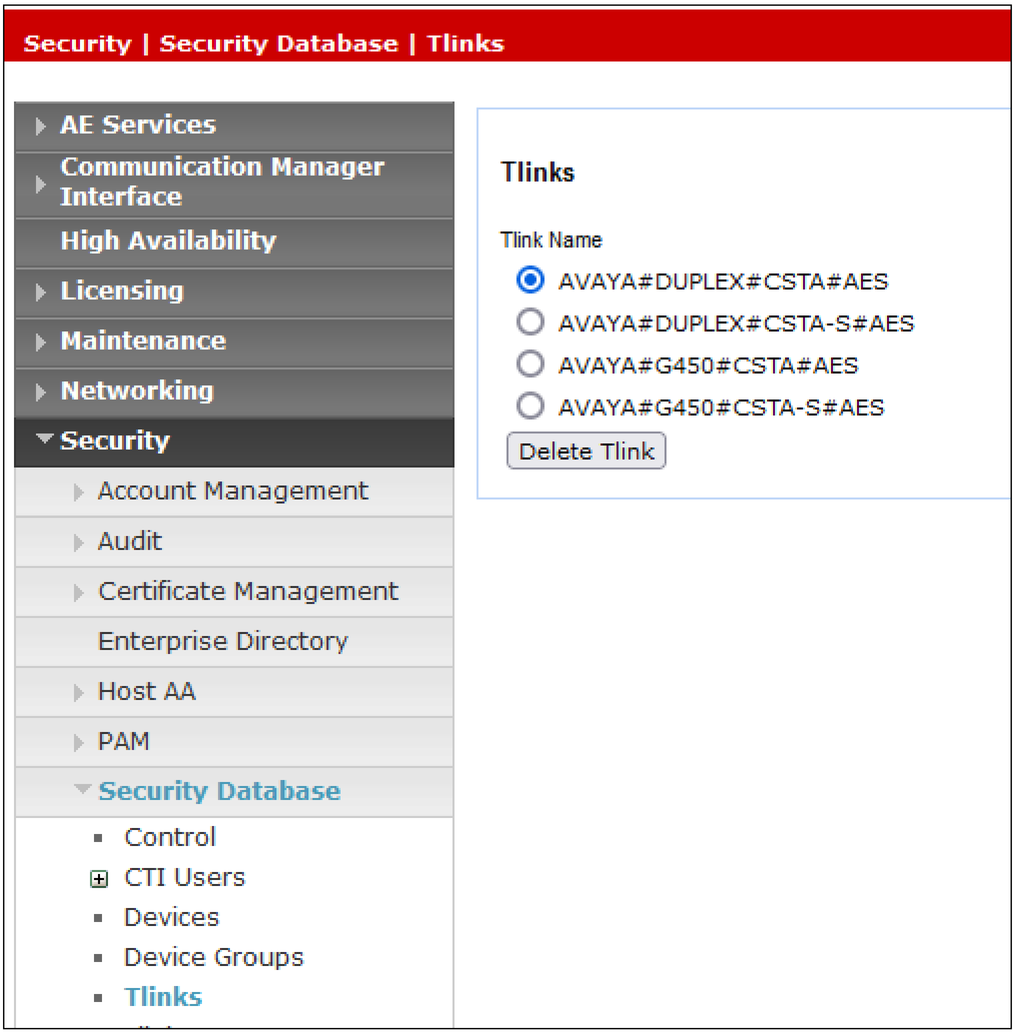
Service Controller

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

Note: DMCC Service must be restarted for WTI service changes to take effect.
For status on actual services, please use Status and Control

6.8. Obtain Tlink Name

Navigate to the **Tlinks** screen by selecting **Security → Security Database → Tlinks** from the left pane. Note the string of the **Tlink Name**, as this will be needed to configure the Cyara Platform in **Section 7**. In this configuration, the unencrypted string is **AVAYA#DUPLEX#CSTA#AES,** which is automatically assigned by the AES server, is used.



Tlinks

Tlink Name

● AVAYA#DUPLEX#CSTA#AES
○ AVAYA#DUPLEX#CSTA-S#AES
○ AVAYA#G450#CSTA#AES
○ AVAYA#G450#CSTA-S#AES

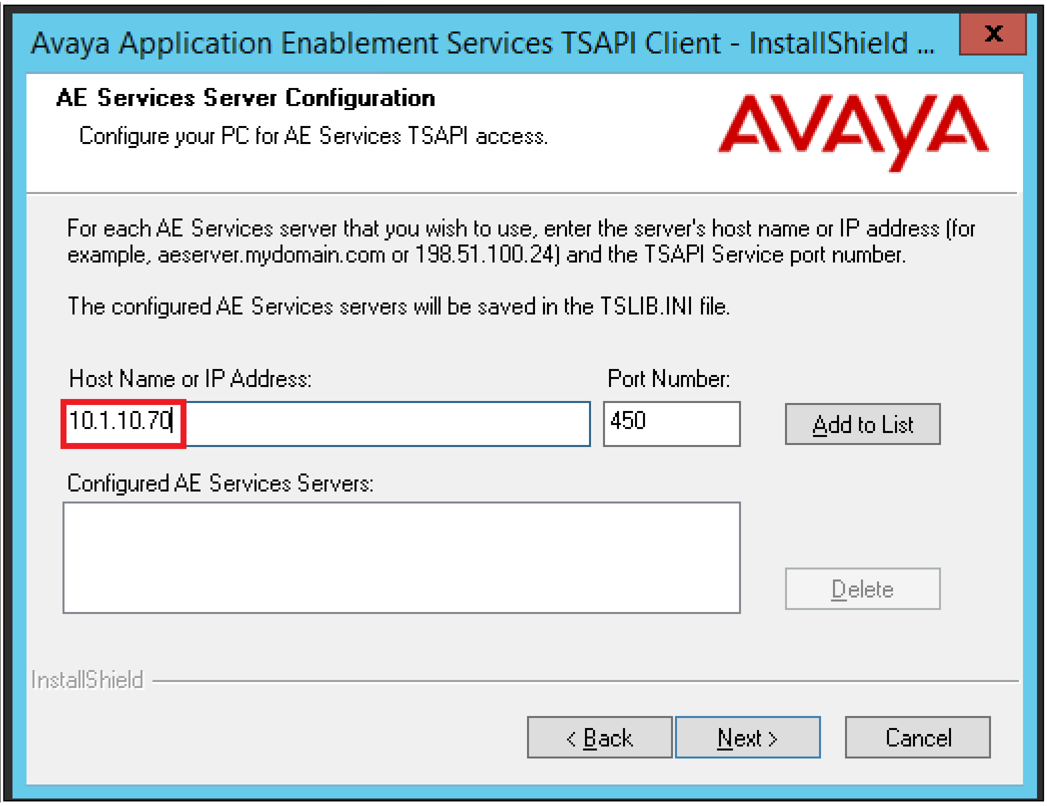
7. Configure Cyara Platform

An on-premises solution is setup for testing. Setup of the Cyara Platform server and Cyara Endpoint Server on Microsoft® Windows 2016 will be done by Cyara engineers and will not be detailed here. Refer to Cyara Deployment Guide reference **[5]** for details. This section highlights the configuration of Cyara Platform server that interface with AES and it includes the following areas:

- Setup Avaya AES TSAPI Client
- Verify Subscription Plans
- Configure Sites and Environment
- Configure Agents and Agents/Server Relationship
- Test Cases, Behaviors and Campaigns

7.1. Setup Avaya AES TSAPI Client

The Avaya AES TSAPI client is installed with the Avaya AES IP address and Port Number in are configured under **Host Name or IP Address** and **Port Number** during installation.



Avaya Application Enablement Services TSAPI Client - InstallShield ...

AE Services Server Configuration

Configure your PC for AE Services TSAPI access.

For each AE Services server that you wish to use, enter the server's host name or IP address (for example, aeserver.mydomain.com or 198.51.100.24) and the TSAPI Service port number.

The configured AE Services servers will be saved in the TSLIB.INI file.

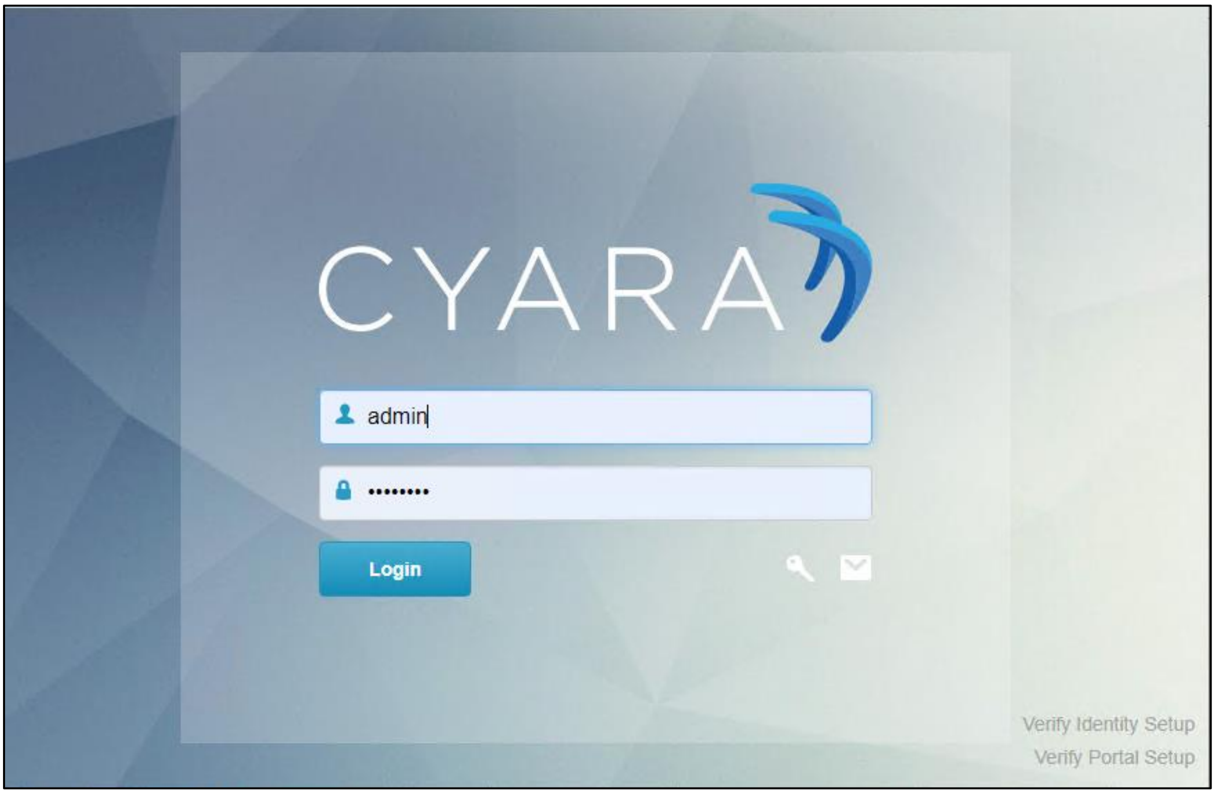
Host Name or IP Address: 10.1.10.70

Port Number: 450

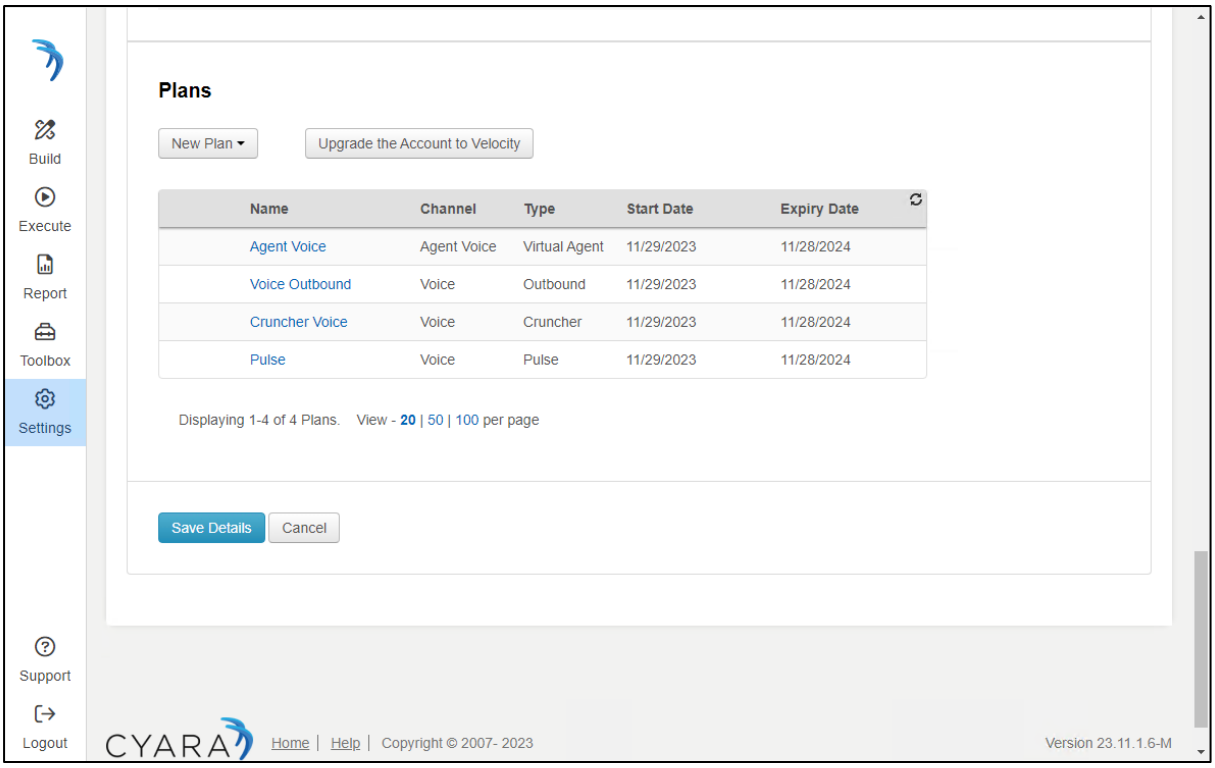
Configured AE Services Servers:

7.2. Verify Subscription Plans

Enter on a web browser **http://<IP address of Cyara Platform Server>/CyaraWebPortal** to access the system. Log in with an appropriate **Username** and **Password**.



In this compliance testing, **Virtual Agent** and **Outbound** under **Plan Type** are required (not shown). With **Virtual Agent** plan, users can create agent details, define behaviors and assign them to agents, run simulations for teams of agents or entire contact center, and access reports on the outcome of the simulations. **Outbound** plan is simply allowing the dialer to make calls to a simulated environment. The dialer is either using the Call Engine component of the Cyara Platform that makes calls to the Call Center or a separate Outbound dialer system. If the subscription plans are not available, then contact the Cyara for a proper activation.



Plans

Name	Channel	Type	Start Date	Expiry Date
Agent Voice	Agent Voice	Virtual Agent	11/29/2023	11/28/2024
Voice Outbound	Voice	Outbound	11/29/2023	11/28/2024
Cruncher Voice	Voice	Cruncher	11/29/2023	11/28/2024
Pulse	Voice	Pulse	11/29/2023	11/28/2024

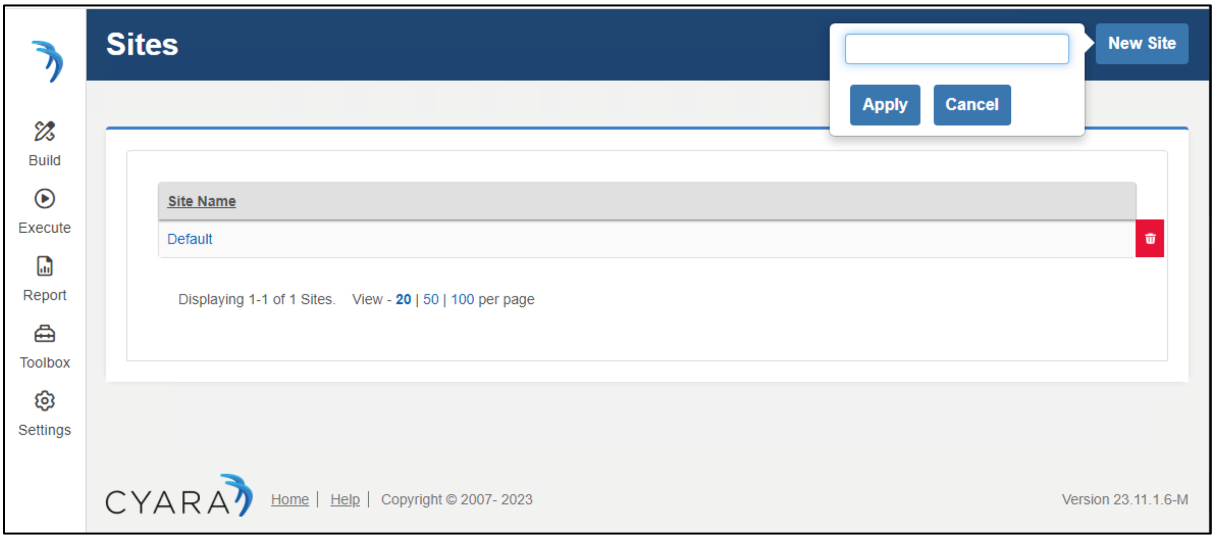
Displaying 1-4 of 4 Plans. View - 20 | 50 | 100 per page

7.3. Configure Sites and Environment

The Cyara Platform server provides the test and monitoring platform where Cyara Portal users log into the platform to configure Test cases and campaigns. In this compliance test, the inbound ACD calls were placed manually. Administration, scripting, monitoring and reporting are done via the Cyara Web Portal.

7.3.1. Add Sites

Click **Build** from the left menu and click **Sites → New Site** on the right of the screen. Enter appropriate site name. In this case, **Default** is used.

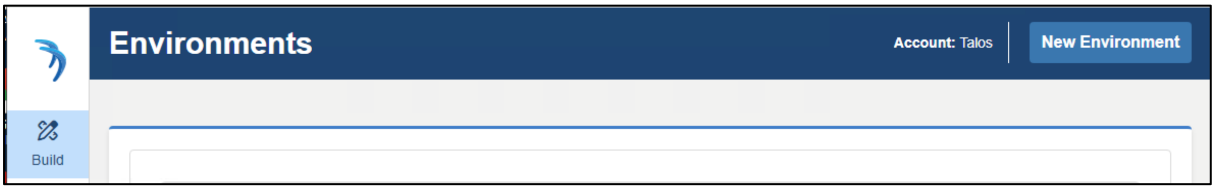


Site Name
Default

Displaying 1-1 of 1 Sites. View - 20 | 50 | 100 per page

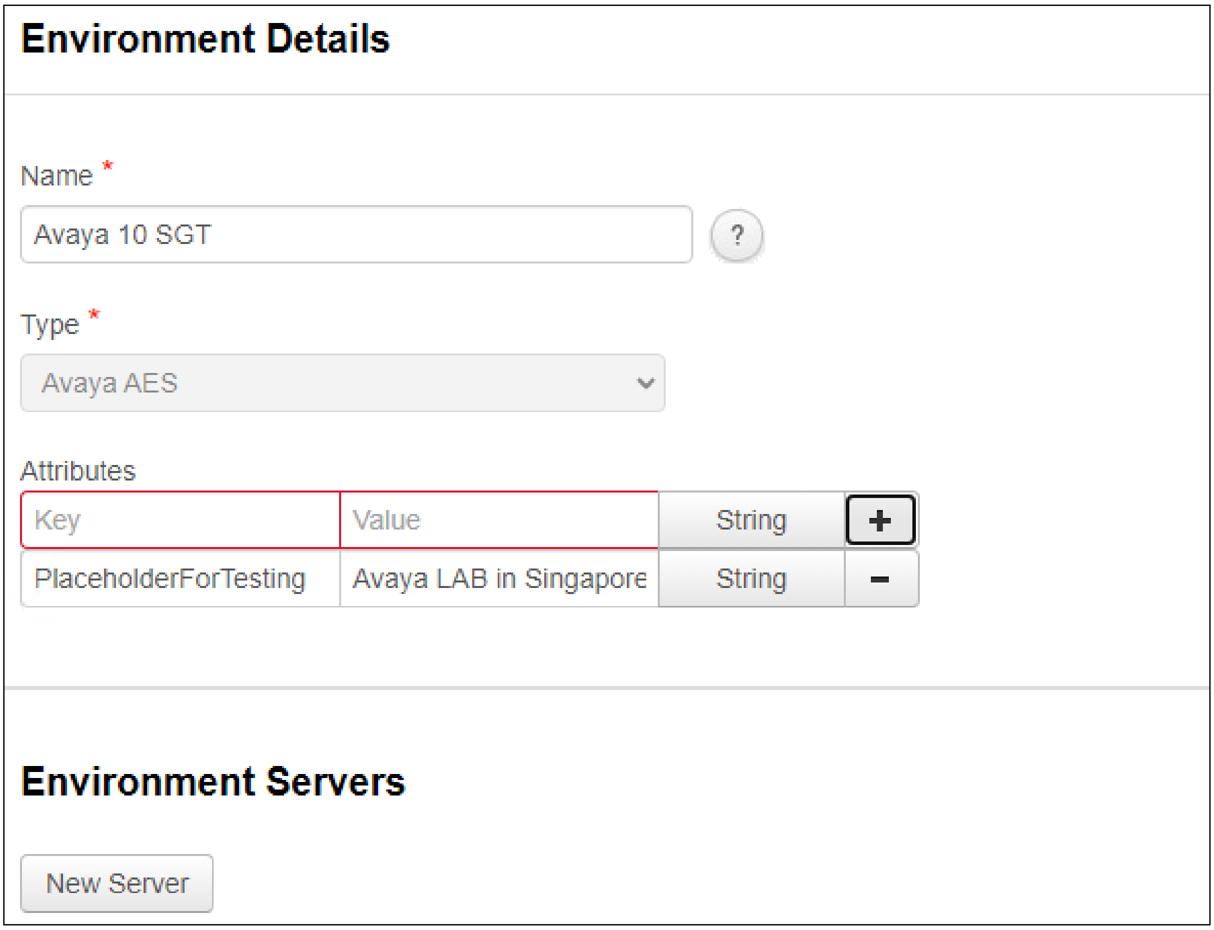
7.3.2. Create Environment

From the menu on the left, **Build** Tab and from the drop down menu, click **Environments** (not shown). Select **New Environment** on the right of the screen.



Enter the following details:

- **Name** Enter appropriate name.
- **Type** Select **Avaya AES** from the drop down menu.
- **Attributes** Click the + and enter appropriate **Key attributes** and **Value**.



Environment Details

Name *: Avaya 10 SGT

Type *: Avaya AES

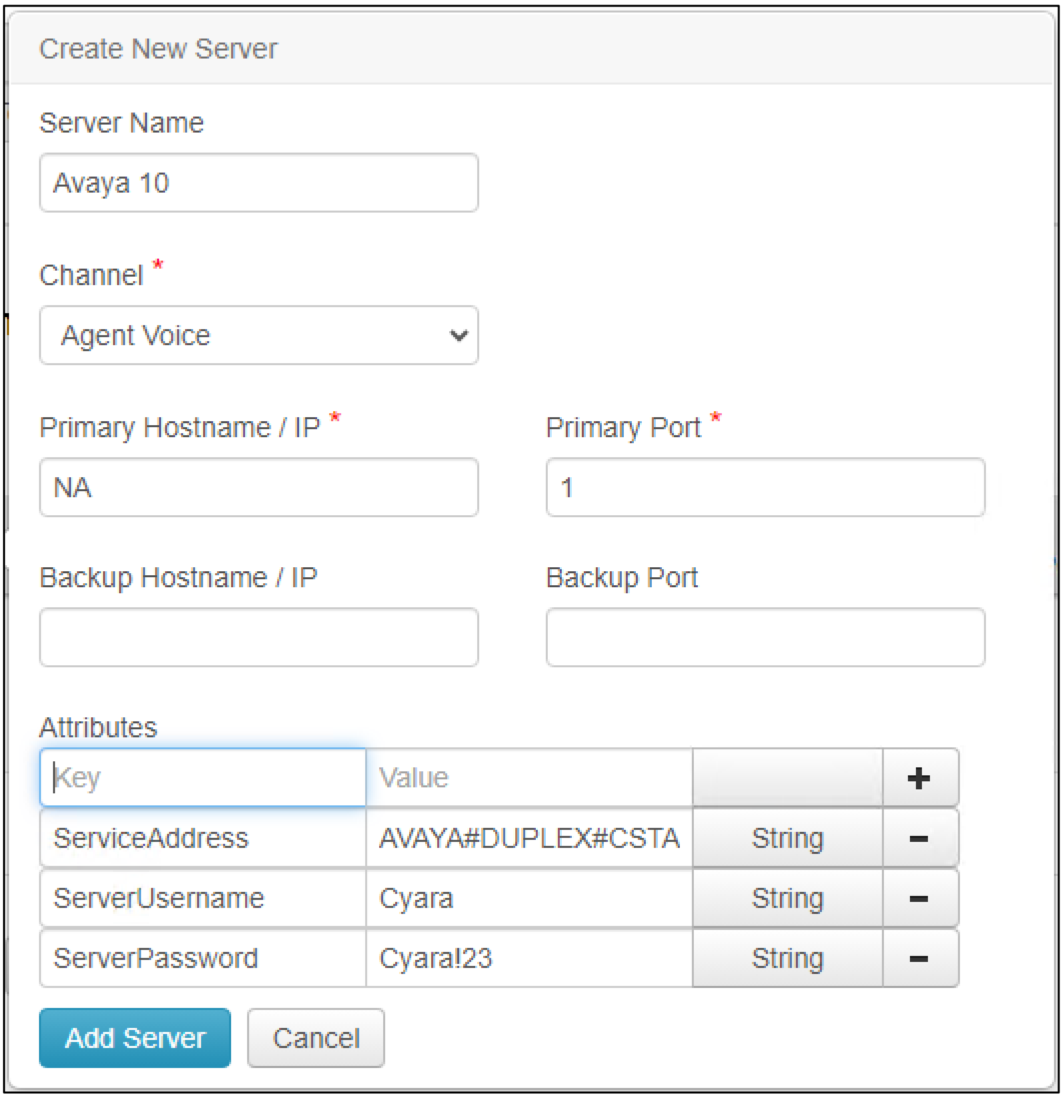
Attributes

Key	Value	String	+
PlaceholderForTesting	Avaya LAB in Singapore	String	−

Environment Servers

Under header **Environment Servers** below click **New Server** and enter the following details:

- **Server Name** Enter appropriate name as blanks are not allowed.
- **Channel** Select "**Agent Voice**" from the drop down menu.
- **Primary Hostname/IP** Set to **NA**
- **Primary Port** Set to **1**



Create New Server

Server Name: Avaya 10

Channel *: Agent Voice

Primary Hostname / IP *: NA

Primary Port *: 1

Backup Hostname / IP:

Backup Port:

Attributes

Key	Value		
ServiceAddress	AVAYA#DUPLEX#CSTA	String	−
ServerUsername	Cyara	String	−
ServerPassword	Cyara!23	String	−

Under **Attributes** in **Create New Server** page, input the following values:

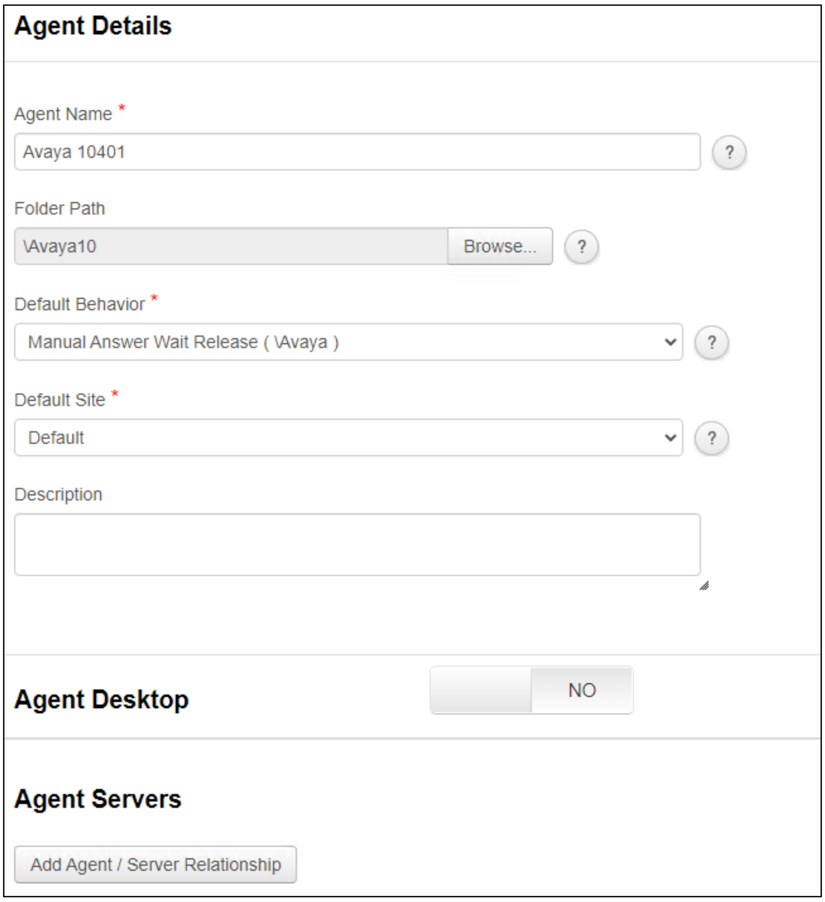
- **ServiceAddress** Enter the Tlink Name as in **Section 6.8**.
- **ServiceUserName** Enter user name created in **Section 6.4**.
- **ServicePassword** Enter user password created in **Section 6.4**.

Click **Add Server** and after all details are entered for the new Environment, click **Save Details** (not shown).

7.4. Configure Agents and Agents/Server Relationship

From the menu on the left, select **Build → Virtual Agents → Agent Library**. Select **New Agent** on the top right of the screen (not shown). Complete the following:

- **Agent Name** Enter appropriate agent name.
- **Folder Path** Browse to the folder where agent details are placed.
- **Default Behavior** Select from a pre-created list of behaviors to be tested.
- **Default Site** Select site created in **Section 7.3.1**.



Agent Details

Agent Name *
Avaya 10401

Folder Path
\Avaya10

Default Behavior *
Manual Answer Wait Release (\Avaya)

Default Site *
Default

Description

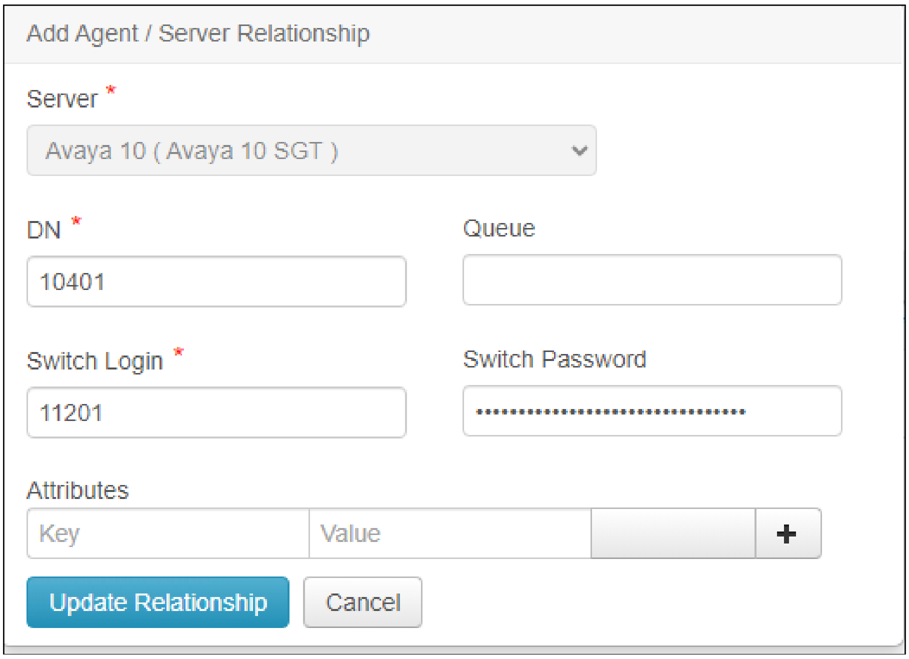
Agent Desktop NO

Agent Servers

Scroll down below, under **Agent Servers** click **Add Agent / Server Relationship**, which will pop up. Complete the following:

- **Server** Select the server created in **Section 7.3.2**.
- **DN** Enter the first Virtual Endpoint extension. This is assumed to be created which is detailed in another Application Notes reference **[4]**.
- **Switch Login** Enter first agent loginID created in **Section 5.3**.
- **Switch Password** Enter first agent password created in **Section 5.3**.

Leave the rest as default and click **Add** or **Update Relationship**. On completion, click **Save Details** (not shown). Repeat this for agents to be created. In this compliance test, agent logins 11201 to 11210 were created.



Add Agent / Server Relationship

Server * Avaya 10 (Avaya 10 SGT)

DN * 10401

Queue

Switch Login * 11201

Switch Password ••••••••••••••••••••••••••••••••••

7.5. Test Cases, Agent Behaviors and Campaigns

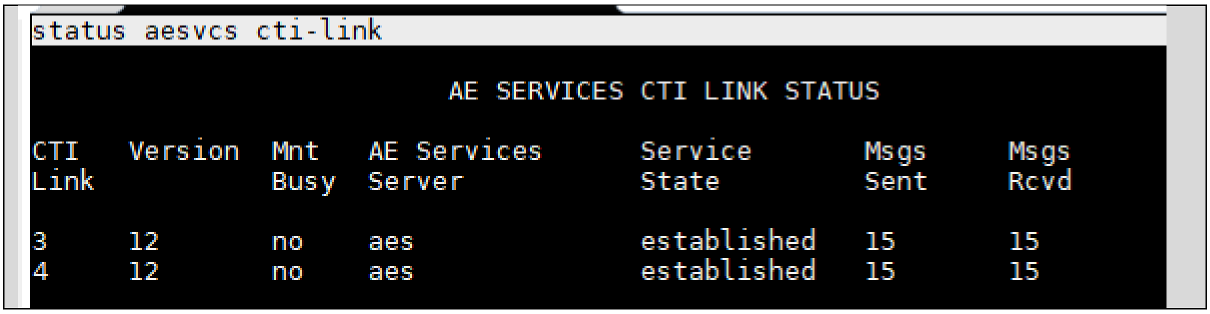
Test cases, Agent Behaviors and Campaigns created for this testing will not be elaborated here as it depends on the desired agent behaviors and test scenarios. User guide can be obtained from Cyara.

8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, AES and Cyara Platform Virtual Agent.

8.1. Verify Avaya Aura® Communication Manager

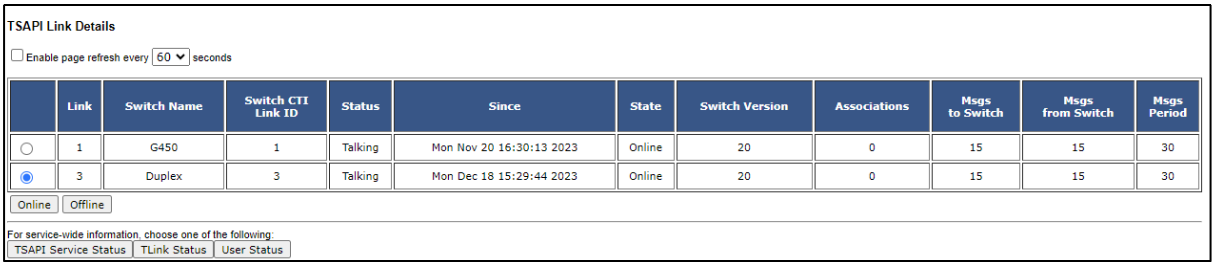
Verify the status of the administered TSAPI CTI link by using the **status aesvcs cti-link** command. The **Service State** field should display **established** for **CTI Link 3**.



```
status aesvcs cti-link

                            AE SERVICES CTI LINK STATUS

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

3      12       no    aes               established  15        15
4      12       no    aes               established  15        15
```

8.2. Verify Avaya Aura® Application Enablement Services

From the Welcome to OAM web pages (not shown), verify the status of the TSAPI service by selecting **Status → TSAPI Service Summary** . In the **TSAPI link details** screen, check the appropriate link and in this compliance test, **Link 3**.



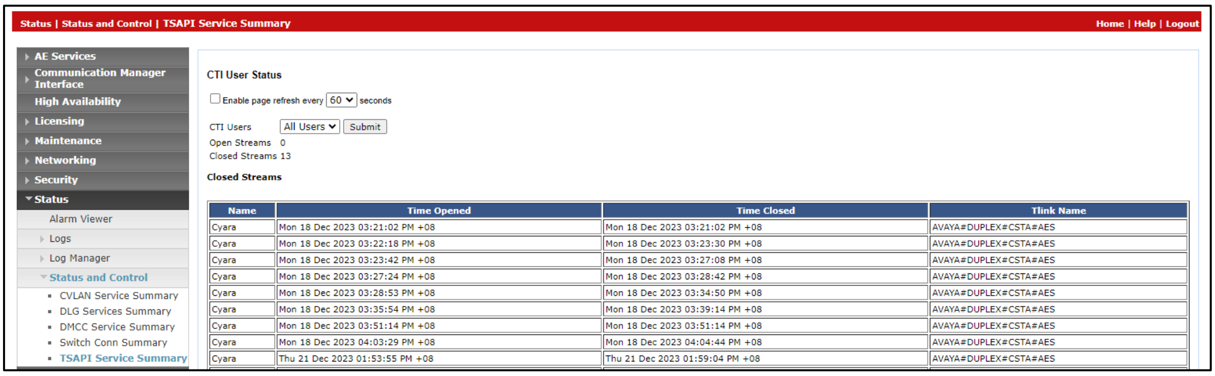
TSAPI Link Details

☐ Enable page refresh every 60 seconds

	Link	Switch Name	Switch CTI Link ID	Status	Since	State	Switch Version	Associations	Msgs to Switch	Msgs from Switch	Msgs Period
○	1	G450	1	Talking	Mon Nov 20 16:30:13 2023	Online	20	0	15	15	30
●	3	Duplex	3	Talking	Mon Dec 18 15:29:44 2023	Online	20	0	15	15	30

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

Click the **User Status** above and select the **Show Closed Streams** (not shown). Verify the successful connection of the CTI user previously after campaigns had been run.



CTI User Status

☐ Enable page refresh every 60 seconds

CTI Users All Users Submit

Open Streams 0

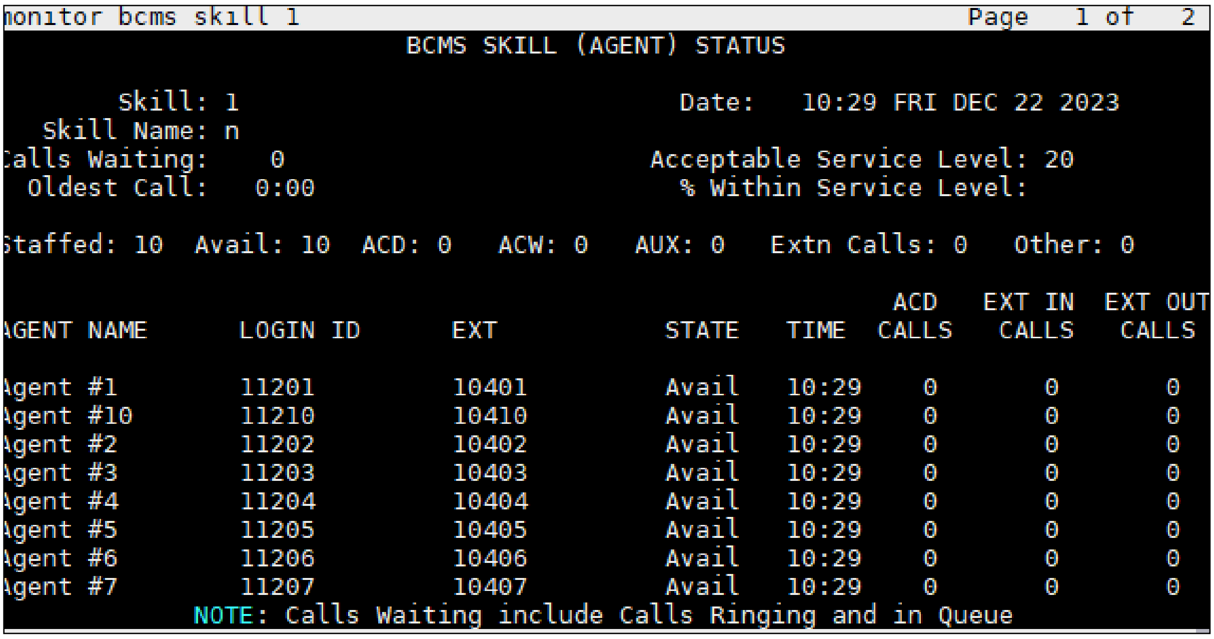
Closed Streams 13

Closed Streams

Name	Time Opened	Time Closed	Tlink Name
Cyara	Mon 18 Dec 2023 03:21:02 PM +08	Mon 18 Dec 2023 03:21:02 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 03:22:18 PM +08	Mon 18 Dec 2023 03:23:30 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 03:23:42 PM +08	Mon 18 Dec 2023 03:27:08 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 03:27:24 PM +08	Mon 18 Dec 2023 03:28:42 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 03:28:53 PM +08	Mon 18 Dec 2023 03:34:50 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 03:35:54 PM +08	Mon 18 Dec 2023 03:39:14 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 03:51:14 PM +08	Mon 18 Dec 2023 03:51:14 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Mon 18 Dec 2023 04:03:29 PM +08	Mon 18 Dec 2023 04:04:44 PM +08	AVAYA#DUPLEX#CSTA#AES
Cyara	Thu 21 Dec 2023 01:53:55 PM +08	Thu 21 Dec 2023 01:59:04 PM +08	AVAYA#DUPLEX#CSTA#AES

8.3. Verify Agent States

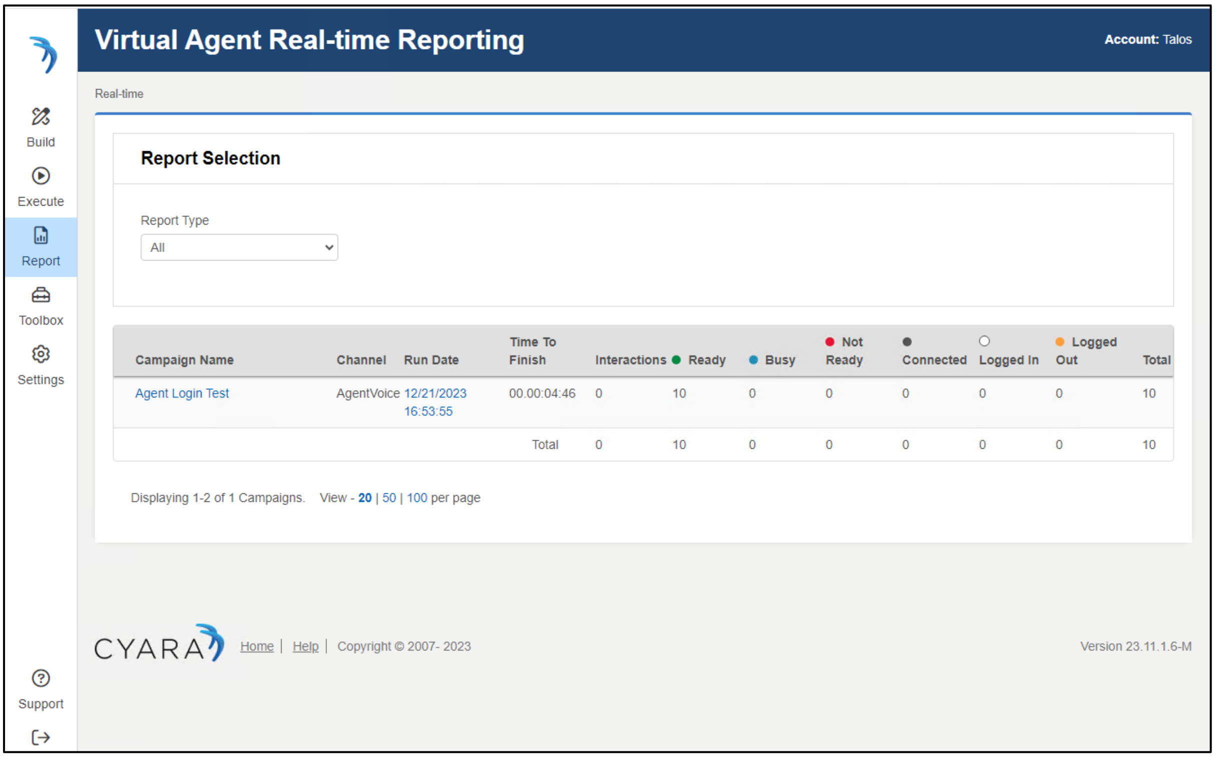
From Communication Manager SAT login, the **monitor bcms** command can be used to verify the agent current state under **STATE** when calls are made, and agent campaigns are run.



```
monitor bcms skill 1                                                   Page    1 of    2
                                 BCMS SKILL (AGENT) STATUS

        Skill: 1                                    Date:    10:29 FRI DEC 22 2023
   Skill Name: n
Calls Waiting:    0                               Acceptable Service Level: 20
  Oldest Call:   0:00                               % Within Service Level:

Staffed: 10  Avail: 10  ACD: 0   ACW: 0   AUX: 0   Extn Calls: 0   Other: 0

                                                                  ACD    EXT IN   EXT OUT
AGENT NAME      LOGIN ID      EXT           STATE    TIME   CALLS   CALLS    CALLS

Agent #1        11201         10401         Avail    10:29    0       0        0
Agent #10       11210         10410         Avail    10:29    0       0        0
Agent #2        11202         10402         Avail    10:29    0       0        0
Agent #3        11203         10403         Avail    10:29    0       0        0
Agent #4        11204         10404         Avail    10:29    0       0        0
Agent #5        11205         10405         Avail    10:29    0       0        0
Agent #6        11206         10406         Avail    10:29    0       0        0
Agent #7        11207         10407         Avail    10:29    0       0        0
             NOTE: Calls Waiting include Calls Ringing and in Queue
```

8.4. Verify Cyara Virtual Agents

When campaigns are running for the Virtual Agent to be active to answer incoming calls, click **Report → Virtual Agents → Real-time**. Below shows the campaign running for the Virtual Agent. Click on the highlighted **Run Date** column for the **Agent Login Test** test details for the campaign.



Virtual Agent Real-time Reporting

Account: Talos

Real-time

Report Selection

Report Type: All

Campaign Name	Channel	Run Date	Time To Finish	Interactions	● Ready	● Busy	● Not Ready	● Connected	○ Logged In	● Logged Out	Total
Agent Login Test	AgentVoice	12/21/2023 16:53:55	00.00:04:46	0	10	0	0	0	0	0	10
			Total	0	10	0	0	0	0	0	10

Displaying 1-2 of 1 Campaigns. View - **20** | 50 | 100 per page

Home | Help | Copyright © 2007- 2023

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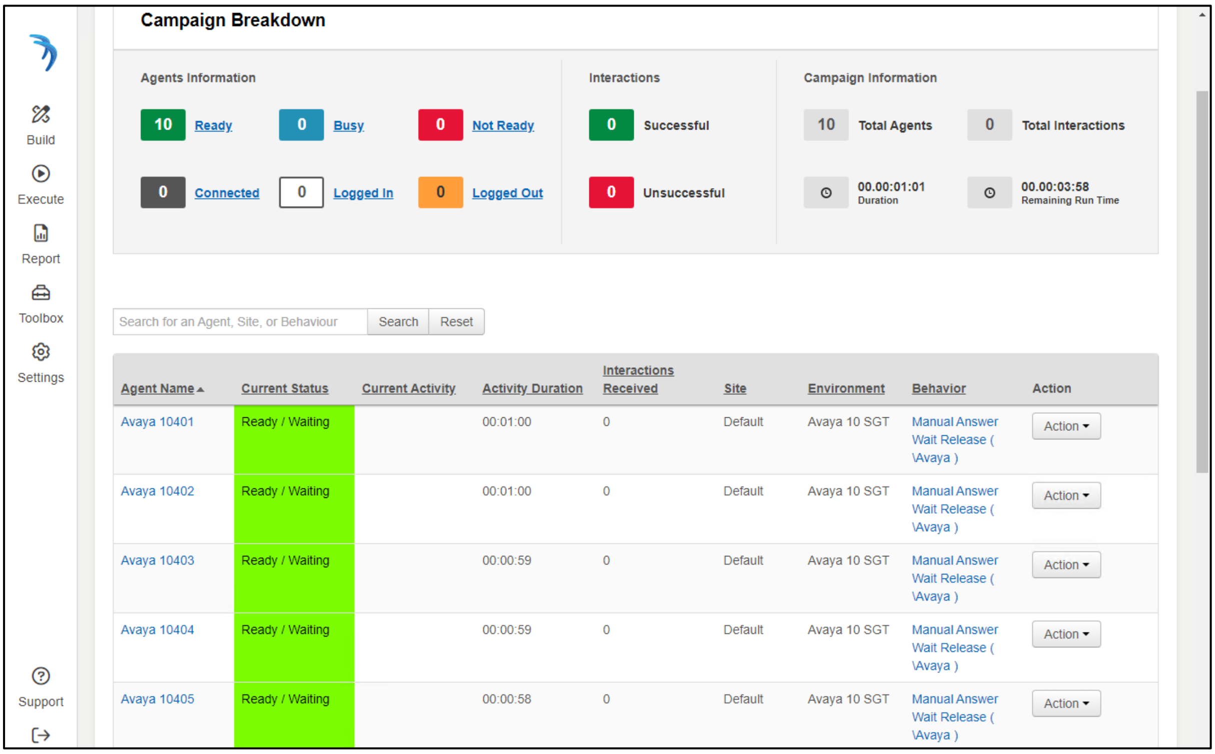
Below shows the Virtual Agent associated with the behaviors under **Behavior** column. Manually make inbound calls to the VDN. From here, agents' activities can be monitored to verify correct behavior.



Campaign Breakdown

Agents Information

10	Ready
0	Busy
0	Not Ready
0	Connected
0	Logged In
0	Logged Out

Interactions

0	Successful
0	Unsuccessful

Campaign Information

10	Total Agents
0	Total Interactions
00.00:01:01	Duration
00.00:03:58	Remaining Run Time

Search for an Agent, Site, or Behaviour | Search | Reset

Agent Name ▲	Current Status	Current Activity	Activity Duration	Interactions Received	Site	Environment	Behavior	Action
Avaya 10401	Ready / Waiting		00:01:00	0	Default	Avaya 10 SGT	Manual Answer Wait Release (\Avaya)	Action ▾
Avaya 10402	Ready / Waiting		00:01:00	0	Default	Avaya 10 SGT	Manual Answer Wait Release (\Avaya)	Action ▾
Avaya 10403	Ready / Waiting		00:00:59	0	Default	Avaya 10 SGT	Manual Answer Wait Release (\Avaya)	Action ▾
Avaya 10404	Ready / Waiting		00:00:59	0	Default	Avaya 10 SGT	Manual Answer Wait Release (\Avaya)	Action ▾
Avaya 10405	Ready / Waiting		00:00:58	0	Default	Avaya 10 SGT	Manual Answer Wait Release (\Avaya)	Action ▾

9. Conclusion

These Application Notes describe the configuration steps required for Cyara Platform Virtual Agent 23.11 to interoperate with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1 using TSAPI. All feature test cases were completed successfully.

10. Additional References

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

The following Avaya product documentations can be found at http://support.avaya.com.
[1] *Deploying Avaya Aura® Application Enablement Services in Virtualized Environment,* Release 10.1.x, Issue 4, May 2023.
[2] *Administering Avaya Aura® Application Enablement Services*, Release 10.1, Issue 8, Aug 2023.
[3] *Avaya Aura® Avaya Communication Manager Feature Description and Implementation*, Release 10.1, Issue 10, Oct 2023.
[4] *Application Notes for Cyara Platform 23.11 with Avaya Aura® Communication Manager 10.1 using H.323 Endpoints Emulation*.

The following Cyara product documentation is obtained is either obtained directly from member or available online.
[5] *Cyara Platform Deployment Guide.*

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