



Avaya Solution & Interoperability Test Lab

Application Notes for Uniphore Real Intent 2.2 with Avaya Session Border Controller for Enterprise 8.1 and Avaya Aura® Application Enablement Services 8.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Uniphore Real Intent 2.2 with Avaya Session Border Controller for Enterprise 8.1 and Avaya Aura® Application Enablement Services 8.1.

Uniphore Real Intent is an audio capture application that uses the Telephony Services Application Programming Interface from Avaya Aura® Application Enablement Services to monitor skill groups and agent stations, and the SIP-based Media Recording interface from Avaya Session Border Controller for Enterprise to capture media for calls between agents and the PSTN. The captured media can be made available to agents as transcriptions and are used by Uniphore Real Intent to automate call summary and disposition.

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 Uniphore Real Intent 2.2 with Avaya Session Border Controller for Enterprise 8.1 and Avaya Aura® Application Enablement Services 8.1.

Real Intent is an audio capture application that uses the Telephony Services Application Programming Interface (TSAPI) from Application Enablement Services to monitor skill groups and agent stations, and the SIP-based Media Recording (SIPREC) interface from Session Border Controller for Enterprise (SBCE) to capture media for calls between agents and the PSTN. The captured media can be made available to agents as transcriptions and are used by Uniphore Real Intent to automate call summary and disposition.

The Real Intent solution consists of multiple components distributed across multiple servers, including the Logger component as the audio capture engine. In the compliance testing, the Logger component consisted of two servers— one Linux server running the OrkWeb and OrkAudio components, and a Windows server running the OrkAvayaTSAPI component along with the Avaya TSAPI Windows Client. The OrkAudio component is responsible for SIPREC connection with SBCE, and the OrkAvayaTSAPI component is responsible for TSAPI connection with Application Enablement Services.

When there is an active ACD call at the agent station, Real Intent is informed of the call via TSAPI events and starts the transcription with captured media from the SIPREC interface. The TSAPI events are also used to determine when to stop the transcription, and the captured media are analyzed by Real Intent. At the end of the ACD call, Real Intent stops the transcription and presents an auto generated summary and disposition to the agent based on the call conversation.

The compliance testing covered inbound ACD calls that are delivered to agents and a couple of outbound calls manually dialed by agent to the PSTN. The compliance testing scope did not include outbound calls as part of any outbound application.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the Real Intent application, the application automatically established TSAPI connection with Application Enablement Services and requested device monitoring.

For the manual part of testing, each call was handled manually at the agent.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to Real Intent.

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 interfaces between Real Intent and Avaya products did not include use of any specific encryption features as requested by Uniphore.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing. The feature testing focused on verifying the following on Real Intent:

- Use of TSAPI in areas of event notification and value queries.
- Use of SIPREC to capture media from SBCE.
- Proper transcription and disposition handling for call scenarios involving agent drop, customer drop, hold, resume, simultaneous calls, long duration, multiple agents, transfer, and conference.

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

2.2. Test Results

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

- The tested Real Intent release 2.2.1.1 assumes fixed station extension association for each agent user and did not allow for changes. Support for variable station extensions is available in subsequent Real Intent release 2.3 but was not verified as part of this compliance test.
- The application requires agents to use the manual-in work mode, so that there is time to process the auto generated call summary and disposition prior to delivery of next ACD call.
- In the compliance testing, transcription for each call started appearing ~15 seconds into the call with varied accuracy on the transcriptions. Uniphore shared that the transcription delay can vary depending on customer environments, and that the accuracy experienced in the compliance testing represents baseline accuracy for out of the box. The accuracy can be enhanced in customer deployments by training models with domain specific data.
- The current release does not support non-monitored stations as transferred-to and conference-to destinations.
- By design, after the conference-from agent completes the conference action to add in the conference-to agent with three-way conversation, the transcription ceased at the conference-from agent and continued at the conference-to agent. At this point, should the conference-to agent drop from the three-way conversation first, then the transcription still continued at the conference-to agent screen until the call is dropped by the remaining parties or until the next ACD call is delivered to the conference-to agent.
- After recovery from a 60 seconds disruption to the Real Intent server, the time indication on the agent screens started incrementing at twice the speed. The workaround to fix the clock increment speed is for agents to log out of Real Intent and then log back in.
- After recovery from a 60 seconds disruption to the agent desktop, transcription for subsequent ACD calls were no longer reflected. Similarly, the workaround is for the agent to log out of Real Intent and then log back in.
- In the tested Real Intent release 2.2.1.1, after a server outage, the NLP service required a manual start. Support for auto start of the NLP service is available in subsequent Real Intent release 2.3 but was not verified as part of this compliance test.

2.3. Support

Technical support on Real Intent can be obtained through the following:

- **Email :** support@uniphore.com
- **Web :** <https://www.uniphore.com/contact>

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**. The detailed administration of connectivity between Communication Manager, Application Enablement Services, Session Manager, SBCE, and of call center devices are not the focus of these Application Notes and will not be described.

In the compliance testing, Uniphore monitored the skill groups and agent stations shown in the table below.

Device Type	Extension
Skill Group	61001, 61002
Agent Station	65001 (H.323), 66002 (SIP)

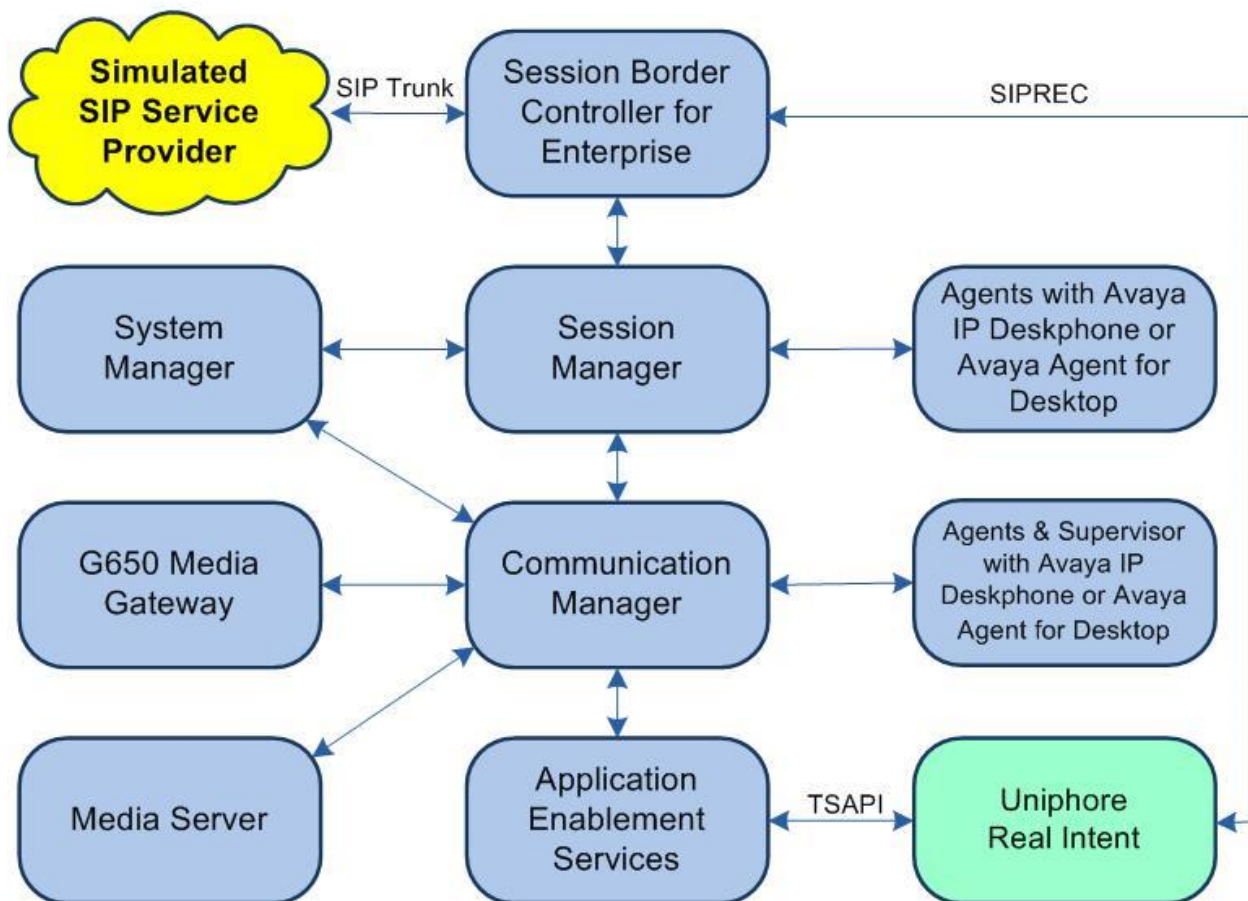


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager in Virtual Environment	8.1.3 (8.1.3.0.1.890.26685)
Avaya G650 Media Gateway	NA
Avaya Aura® Media Server in Virtual Environment	8.0.2.138
Avaya Aura® Application Enablement Services in Virtual Environment	8.1.3 (8.1.3.0.0.25-0)
Avaya Aura® Session Manager in Virtual Environment	8.1.3 (8.1.3.0.813014)
Avaya Aura® System Manager in Virtual Environment	8.1.3 (8.1.3.0.1012091)
Avaya Session Border Controller for Enterprise in Virtual Environment	8.1.2 (8.1.2.0-31-19809)
Avaya Agent for Desktop (H.323 & SIP)	2.0.6.0.10
Avaya 9611G & J179 IP Deskphone (H.323)	6.8502
Avaya J169 IP Deskphone (SIP)	4.0.7.1.5
Uniphore Real Intent on CentOS Linux <ul style="list-style-type: none"> • UI • User Management Service • Audio Receiver • PostgreSQL • Apache Kafka • Nuance Transcription Service • Mongo Database 	2.2.1.1 7.9.2009 2.2.1.1 2.2.1.1 2.2.1.1 11.1 2.4.1 4.7 4.2.1.1
Uniphore Logger with components on CentOS Linux & Microsoft Windows Server <ul style="list-style-type: none"> • OrkWeb • OrkAudio • OrkAvayaTSAPI • Avaya TSAPI Windows Client (csta32.dll) 	NA 7.9.2009 & 2016 Standard 2.70 2.85 x8553 6.3.3.103

5. Configure Avaya Aura® Communication Manager

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

- Verify license
- Administer CTI link
- Administer codec set
- Administer system parameters features
- Administer SIP trunk group

5.1. Verify License

Log into the System Access Terminal to verify that the Communication Manager license has proper permissions for features illustrated in these Application Notes. Use the “display system-parameters customer-options” command to verify that the **Computer Telephony Adjunct Links** customer option is set to “y” on **Page 4**. If this option is not set to “y”, then contact the Avaya sales team or business partner for a proper license file.

display system-parameters customer-options		Page	4 of 12
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? y	DCS Call Coverage? y		
ASAI Link Plus Capabilities? y	DCS with Rerouting? y		

5.2. Administer CTI Link

Add a CTI link using the “add cti-link n” command, where “n” is an available CTI link number. Enter an available extension number in the **Extension** field. Note that the CTI link number and extension number may vary.

Enter “ADJ-IP” in the **Type** field, and a descriptive name in the **Name** field. Default values may be used in the remaining fields.

add cti-link 1	Page	1 of 3
CTI LINK		
CTI Link: 1		
Extension: 60111		
Type: ADJ-IP		
	COR: 1	
Name: AES CTI Link		
Unicode Name? n		

5.3. Administer Codec Set

Use the “change ip-codec-set n” command, where “n” is an existing codec set number used by the agent stations. For **Audio Codec**, make certain only variants of G711 and/or G729 codec are configured, as shown below. Note that Uniphore supports the G711 and G729 codec variants.

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

                                IP MEDIA PARAMETERS

Codec Set: 1

Audio      Silence      Frames      Packet
Codec      Suppression   Per Pkt    Size (ms)
1: G.711MU      n           2         20
2: G.729        n           2         20
3:
4:
5:
6:
7:

Media Encryption                                Encrypted SRTP: best-effort
1: 1-srtp-aescm128-hmac80
2: aes
3: none
4:
```


5.4. Administer System Parameters Features

Log into the System Access Terminal. Use the “change system-parameters features” command to enable **Create Universal Call ID (UCID)**, which is located on **Page 5**. For **UCID Network Node ID**, enter an available node ID.

```
change system-parameters features                                     Page 5 of 19
                           FEATURE-RELATED SYSTEM PARAMETERS

SYSTEM PRINTER PARAMETERS
  Endpoint:                  Lines Per Page: 60

SYSTEM-WIDE PARAMETERS
  Switch Name:
  Emergency Extension Forwarding (min): 10
  Enable Inter-Gateway Alternate Routing? n
  Enable Dial Plan Transparency in Survivable Mode? n
  COR to Use for DPT: station
  EC500 Routing in Survivable Mode: dpt-then-ec500

MALICIOUS CALL TRACE PARAMETERS
  Apply MCT Warning Tone? n    MCT Voice Recorder Trunk Group:
  Delay Sending RElease (seconds): 0

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

UNIVERSAL CALL ID
  Create Universal Call ID (UCID)? y    UCID Network Node ID: 27
```

Navigate to **Page 13** and enable **Send UCID to ASAI**. This parameter allows for the universal call ID to be sent to Uniphore.

```
change system-parameters features                                     Page 13 of 19
                           FEATURE-RELATED SYSTEM PARAMETERS

CALL CENTER MISCELLANEOUS
  Callr-info Display Timer (sec): 10
  Clear Callr-info: next-call
  Allow Ringer-off with Auto-Answer? n

  Reporting for PC Non-Predictive Calls? n

  Agent/Caller Disconnect Tones? N
  Interruptible Aux Notification Timer (sec): 3
  Zip Tone Burst for Callmaster Endpoints: double

ASAI
  Copy ASAI UI During Conference/Transfer? n
  Call Classification After Answer Supervision? y
  Send UCID to ASAI? y
  For ASAI Send DTMF Tone to Call Originator? y
  Send Connect Event to ASAI For Announcement Answer? n
  Prefer H.323 Over SIP For Dual-Reg Station 3PCC Make Call? n
```

5.5. Administer SIP Trunk Group

Use the “change trunk-group n” command, where “n” is the trunk group number used by Communication Manager with Session Manager for outbound calls to the PSTN. Enter the following values for the specified fields and retain the default values for the remaining fields.

In this case, the pertinent trunk group number is “212”. Navigate to **Page 3**. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **UI Treatment:** “shared”
- **Send UCID:** “y”

```
add trunk-group 212                                     Page 3 of 5
TRUNK FEATURES
    ACA Assignment? n                                   Measured: none
                                                    Maintenance Tests? y

    Suppress # Outpulsing? n   Numbering Format: private
                                UI Treatment: shared
                                Maximum Size of UUI Contents: 128
                                Replace Restricted Numbers? n
                                Replace Unavailable Numbers? n

                                Modify Tandem Calling Number: tandem-cpn-form
                                Send UCID? y

    Show ANSWERED BY on Display? y
```

6. Configure Avaya Aura® Application Enablement Services

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

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

6.1. Launch OAM Interface

Access the OAM web-based interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Application Enablement Services server.

The screen below is displayed. Log in using the appropriate credentials.



The screenshot shows the Avaya Application Enablement Services Management Console login page. At the top left is the Avaya logo. To its right, the text "Application Enablement Services" is displayed in a large, bold font, with "Management Console" in a smaller font below it. A red horizontal bar spans the width of the page, with the word "Help" in white text on the right side. In the center of the page is a light gray rectangular box containing the text "Please login here:" followed by a "Username" label and a text input field. Below the input field is a "Continue" button. At the bottom of the page, another red horizontal bar is present, and below it, the copyright notice "Copyright © 2009-2020 Avaya Inc. All Rights Reserved." is displayed.

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

The screenshot shows the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo and the title "Application Enablement Services Management Console". On the right, a welcome message for the user is displayed, including login details and server information. Below the header is a red navigation bar with "Home", "Help", and "Logout" links. The left sidebar contains a list of menu items: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, Security, Status, User Management, Utilities, and Help. The main content area displays the "Welcome to OAM" message, explaining that the OAM web provides tools for managing the AE Server and listing the administrative domains: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, Security, Status, User Management, Utilities, and Help. It also notes that these domains can be served by one administrator or separate administrators.

Welcome: User
Last login: Thu Nov 19 08:10:16 2020 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.2.1.0.6-0
Server Date and Time: Thu Nov 19 13:04:19 EST 2020
HA Status: Not Configured

Home | Help | Logout

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.

6.2. Verify License

Select **Licensing → WebLM Server Access** in the left pane, to display the applicable WebLM server log in screen (not shown). Log in using the appropriate credentials and navigate to display installed licenses (not shown).

The screenshot shows the Avaya Application Enablement Services Management Console with the "Licensing" menu item selected in the left sidebar. The main content area displays the "Licensing" screen, which provides instructions for setting up and maintaining the WebLM. It lists the following steps: 1. WebLM Server Address, 2. WebLM Server Access, and 3. Reserved Licenses. The "WebLM Server Access" option is highlighted in the sidebar.

Welcome: User
Last login: Thu Nov 19 08:10:16 2020 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.2.1.0.6-0
Server Date and Time: Thu Nov 19 13:07:01 EST 2020
HA Status: Not Configured

Licensing | Home | Help | Logout

Licensing

If you are setting up and maintaining the WebLM, you need to use the following:

- WebLM Server Address

If you are importing, setting up and maintaining the license, you need to use the following:

- WebLM Server Access

If you want to administer TSAPI Reserved Licenses or DMCC Reserved Licenses, you need to use the following:

- Reserved Licenses

Select **Licensed products** → **APPL_ENAB** → **Application_Enablement** in the left pane, to display the **Application Enablement (CTI)** screen in the right pane.

Verify that there are sufficient licenses for **TSAPI Simultaneous Users**, as shown below.

AVAYA
Aura® System Manager 8.1

Users ▾ Elements ▾ Services ▾ | Widgets ▾ Shortcuts ▾

Home User Management Licenses

L...

- WebLM Home
- Install license
- Licensed products
- APPL_ENAB
- ▼ Application_Enablement
 - View by feature
 - View by local WebLM
 - Enterprise configuration
 - ▶ Local WebLM Configuration
 - ▶ Usages
 - ▶ Allocations
 - Periodic status
- ASBCE
 - ▶ Session_Border_Controller_E_AE
- CCTR
 - ▶ ContactCenter
- COMMUNICATION_MANAGER
 - ▶ Call_Center
 - ▶ Communication_Manager
- MESSAGING
 - ▶ Messaging
- MSR
 - ▶ Media_Server
- SYSTEM_MANAGER
 - ▶ System_Manager
- SessionManager

Application Enablement (CTI) - Release: 8 - SID: 10503000(Enterprise)

You are here: Licensed Products > Application_Enablement > View by Feature

License installed on: August 8, 2019 4:43:51 PM -05:00

License File Host IDs:	VE-83-02-2D-26-52-01
Active License Mode	Standard
License State	NA
Pay Per Use License Available	No
Standard License Available	Yes

Feature (License Keyword)	License Capacity	Currently available
Unified CC API Desktop Edition (VALUE_AES_AEC_UNIFIED_CC_DESKTOP)	1000	1000
CVLAN ASAI (VALUE_AES_CVLAN_ASAI)	16	16
Device Media and Call Control (VALUE_AES_DMCC_DMC)	1000	1000
AES ADVANCED SMALL SWITCH (VALUE_AES_AEC_SMALL_ADVANCED)	3	3
DLG (VALUE_AES_DLG)	16	16
TSAPI Simultaneous Users (VALUE_AES_TSAPI_USERS)	1000	1000

6.3. Administer TSAPI Link

Select **AE Services** → **TSAPI** → **TSAPI Links** from the left pane of the **Management Console** to administer a TSAPI link. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link**.

The screenshot shows the AVAYA Application Enablement Services Management Console. The top right corner displays user information: Welcome: User, Last login: Thu Nov 19 08:10:16 2020 from 192.168.200.20, Number of prior failed login attempts: 0, HostName/IP: aes7/10.64.101.239, Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE, SW Version: 8.1.2.1.0.6-0, Server Date and Time: Thu Nov 19 13:07:01 EST 2020, HA Status: Not Configured. The left navigation pane shows the hierarchy: AE Services > TSAPI > TSAPI Links. The main content area is titled "TSAPI Links" and contains a table with columns: Link, Switch Connection, Switch CTI Link #, ASAI Link Version, and Security. Below the table are buttons for Add Link, Edit Link, and Delete Link.

The **Add TSAPI Links** screen is displayed next.

The **Link** field is only local to the Application Enablement Services server and may be set to any available number. For **Switch Connection**, select the relevant switch connection from the drop-down list. In this case, the existing switch connection “cm7” is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. Retain the default values in the remaining fields.

The screenshot shows the AVAYA Application Enablement Services Management Console with the "Add TSAPI Links" screen. The left navigation pane shows the hierarchy: AE Services > TSAPI > TSAPI Links. The main content area is titled "Add TSAPI Links" and contains a form with the following fields: Link (dropdown menu with value 1), Switch Connection (dropdown menu with value cm7), Switch CTI Link Number (dropdown menu with value 1), ASAI Link Version (dropdown menu with value 11), and Security (dropdown menu with value Unencrypted). Below the form are buttons for Apply Changes and Cancel Changes.

6.4. Administer Uniphore User

Select **User Management** → **User Admin** → **Add User** from the left pane, to display the **Add User** screen in the right pane.

Enter desired values for **User Id**, **Common Name**, **Surname**, **User Password**, and **Confirm Password**. For **CT User**, select “Yes” from the drop-down list. Retain the default value in the remaining fields.

AVAYA **Application Enablement Services**
Management Console

Welcome: User
Last login: Wed Nov 18 10:38:30 2020 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.2.1.0.6-0
Server Date and Time: Thu Nov 19 08:18:05 EST 2020
HA Status: Not Configured

User Management | User Admin | Add UserHome | Help | Logout

AE Services

Communication Manager Interface

High Availability

Licensing

Maintenance

Networking

Security

Status

User Management

Service Admin

User Admin

Add User

Change User Password

List All Users

Modify Default Users

Search Users

Utilities

Help

Add User

Fields marked with * can not be empty.

* User Iduniphore

* Common Nameuniphore

* Surnameuniphore

* User Password*****

* Confirm Password*****

Admin Note

Avaya RoleNone

Business Category

Car License

CM Home

Css Home

CT UserYes

Department Number

Display Name

Employee Number

Employee Type

Enterprise Handle

Given Name

6.5. Administer 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 Uniphore user from **Section 6.4**.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo and the title "Application Enablement Services Management Console". A welcome message and system information are shown in the top right corner. The main navigation pane on the left lists various services, with "Security" expanded to show "Security Database" and "Control" selected. The main content area displays the "SDB Control for DMCC, TSAPI, JTAPI and Telephony Web Services" configuration page, which includes two unchecked checkboxes and an "Apply Changes" button.

Welcome: User
Last login: Thu Nov 19 08:10:16 2020 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.2.1.0.6-0
Server Date and Time: Thu Nov 19 13:19:43 EST 2020
HA Status: Not Configured

AVAYA Application Enablement Services
Management Console

Security | Security Database | Control Home | Help | Logout

AE Services
Communication Manager Interface
High Availability
Licensing
Maintenance
Networking
Security
Account Management
Audit
Certificate Management
Enterprise Directory
Host AA
PAM
Security Database
Control

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

☐ Enable SDB for DMCC Service
☐ Enable SDB for TSAPI Service, JTAPI and Telephony Web Services
Apply Changes

6.6. Restart Service

Select **Maintenance** → **Service Controller** from the left pane, to display the **Service Controller** screen in the right pane. Check **TSAPI Service**. Select **Restart Service**.

AVAYA **Application Enablement Services**
Management Console

Welcome: User
Last login: Thu Nov 19 08:10:16 2020 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.2.1.0.6-0
Server Date and Time: Thu Nov 19 13:22:30 EST 2020
HA Status: Not Configured

Maintenance | Service ControllerHome | Help | Logout

▶ AE Services

▶ Communication Manager Interface

▶ High Availability

▶ Licensing

▼ Maintenance

▶ Date Time/NTP Server

▶ Security Database

▶ Service Controller

▶ Server Data

▶ Networking

▶ Security

▶ Status

Service Controller

Service	Controller Status
<input type="checkbox"/> ASAI Link Manager	Running
<input type="checkbox"/> DMCC Service	Running
<input type="checkbox"/> CVLAN Service	Running
<input type="checkbox"/> DLG Service	Running
<input type="checkbox"/> Transport Layer Service	Running
<input checked="" type="checkbox"/> TSAPI Service	Running

For status on actual services, please use [Status and Control](#)

StartStopRestart ServiceRestart AE ServerRestart LinuxRestart Web Server

6.7. Obtain Tlink Name

Select **Security** → **Security Database** → **Tlinks** from the left pane. The **Tlinks** screen shows a listing of the Tlink names. A new Tlink name is automatically generated for the TSAPI service. Locate the Tlink name associated with the relevant switch connection, which would use the name of the switch connection as part of the Tlink name. Make a note of the associated Tlink name, to be used later for configuring Uniphore.

In this case, the associated Tlink name is “AVAYA#CM7#CSTA#AES7”. Note the use of the switch connection “CM7” from **Section 6.3** as part of the Tlink name.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo and the text "Application Enablement Services Management Console". A welcome message in the top right corner reads: "Welcome: User", "Last login: Thu Nov 19 08:10:16 2020 from 192.168.200.20", "Number of prior failed login attempts: 0", "HostName/IP: aes7/10.64.101.239", "Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE", "SW Version: 8.1.2.1.0.6-0", "Server Date and Time: Thu Nov 19 13:24:38 EST 2020", and "HA Status: Not Configured". The main navigation bar shows "Security | Security Database | Tlinks" and "Home | Help | Logout". The left sidebar contains a tree view with categories: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, and Security. Under Security, there are sub-items: Account Management, Audit, Certificate Management, Enterprise Directory, Host AA, PAM, Security Database (expanded), and Tlinks (selected). The main content area, titled "Tlinks", shows a "Tlink Name" field with a radio button selected next to "AVAYA#CM7#CSTA#AES7" and a "Delete Tlink" button.

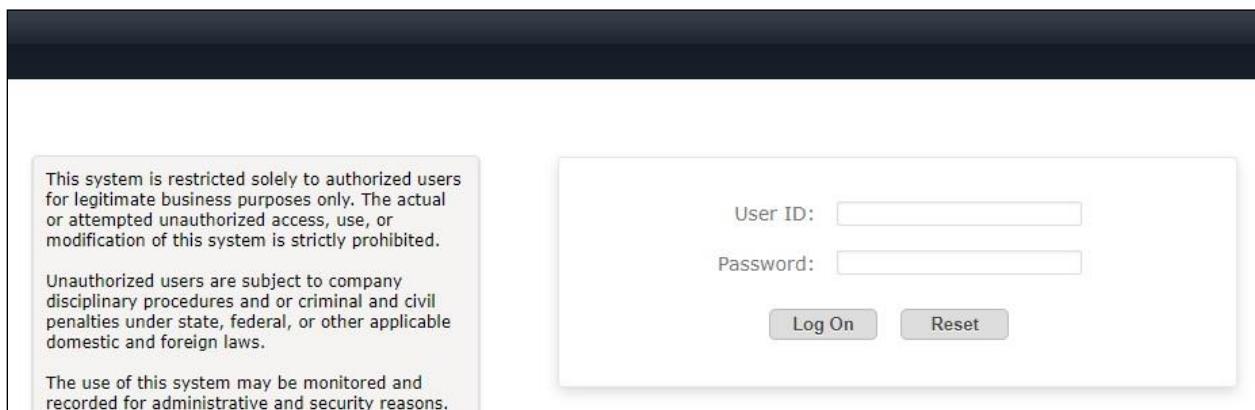
7. Configure Avaya Aura® Session Manager

This section provides the procedures for configuring Session Manager, which is performed via the web interface of System Manager. The procedures include the following areas:

- Launch System Manager
- Administer users

7.1. Launch System Manager

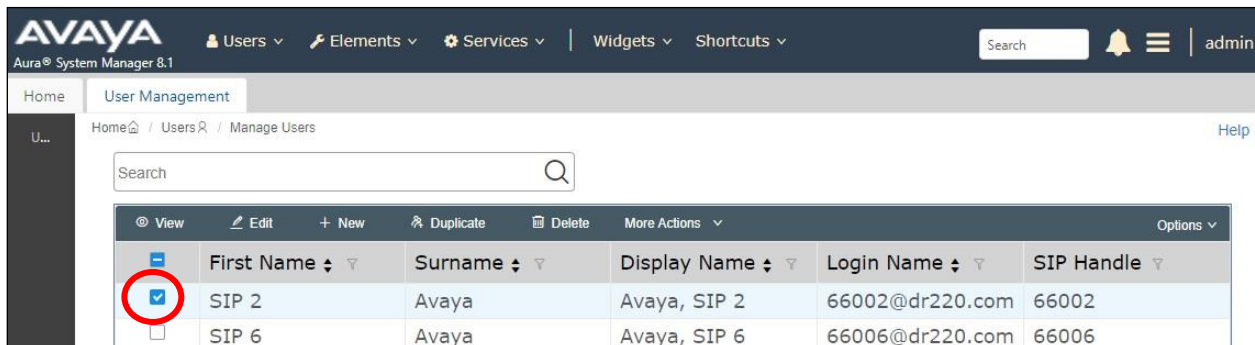
Access the System Manager web interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of System Manager. Log in using the appropriate credentials.



7.2. Administer Users

In the subsequent screen (not shown), select **Users → User Management** from the top menu. Select **User Management → Manage Users** (not shown) from the left pane to display the screen below.

Select the entry associated with the first SIP agent station from **Section 3**, in this case “66002”, and click **Edit**.



	First Name	Surname	Display Name	Login Name	SIP Handle
<input checked="" type="checkbox"/>	SIP 2	Avaya	Avaya, SIP 2	66002@dr220.com	66002
<input type="checkbox"/>	SIP 6	Avaya	Avaya, SIP 6	66006@dr220.com	66006

The **User Profile | Edit** screen is displayed. Select the **Communication Profile** tab, followed by **CM Endpoint Profile** to display the screen below.

Click on the **Editor** icon shown below.

The screenshot shows the Avaya Aura System Manager 8.1 interface. The top navigation bar includes the Avaya logo, 'Aura® System Manager 8.1', and tabs for Users, Elements, Services, Widgets, and Shortcuts. A search bar and notification bell are also present. The main content area is titled 'User Profile | Edit | 66002@dr220.com' and includes buttons for 'Commit & Continue', 'Commit', and 'Cancel'. The 'Communication Profile' tab is selected, and the 'CM Endpoint Profile' is highlighted in the left sidebar. The 'Extension' field is set to '66002' and has a blue Editor icon highlighted with a red box. Other fields include 'System' (DR-CM), 'Profile Type' (Endpoint), 'Set Type' (J169CC), 'Port' (S000068), and 'Sip Trunk' (aar).

Field	Value
System	DR-CM
Profile Type	Endpoint
Extension	66002
Set Type	J169CC
Port	S000068
Sip Trunk	aar

The **Edit Endpoint** pop-up screen is displayed. For **Type of 3PCC Enabled**, select “Avaya” as shown below.

Repeat this section for all SIP agent users from **Section 3**. In the compliance testing, one SIP agent extension 66002 was configured.

The screenshot shows the 'Edit Endpoint' configuration screen in the Avaya Aura System Manager 8.1 interface. The top navigation bar includes 'Users', 'Elements', 'Services', 'Widgets', and 'Shortcuts'. The main content area is titled 'Edit Endpoint' and includes a 'Done' button and a '[Save As Template]' link. The form is divided into two main sections: a top section for basic endpoint information and a bottom section for detailed options.

Basic Information:

- System:** DR-CM
- Extension:** 66002
- Template:** Select (dropdown)
- Set Type:** J169CC
- Port:** S000068
- Security Code:** (empty field)
- Name:** Avaya, SIP 2

Options Section:

- General Options (G):** (selected tab)
- Feature Options (F):**
- Site Data (S):**
- Abbreviated Call Dialing (A):**
- Enhanced Call Fwd (E):**
- Button Assignment (B):**
- Profile Settings (P):**
- Group Membership (M):**

Configuration Details:

- Class of Restriction (COR):** 1
- Emergency Location Ext:** 66002
- Tenant Number:** 1
- SIP Trunk:** Qaar
- Coverage Path 1:** 1
- Lock Message:** ☐
- Multibyte Language:** Not Applicable
- Class Of Service (COS):** 1
- Message Lamp Ext.:** 66002
- Type of 3PCC Enabled:** Avaya (highlighted with a red box)
- Coverage Path 2:** (empty field)
- Localized Display Name:** Avaya, SIP 2
- Enable Reachability for Station Domain Control:** system

SIP URI: (empty field)

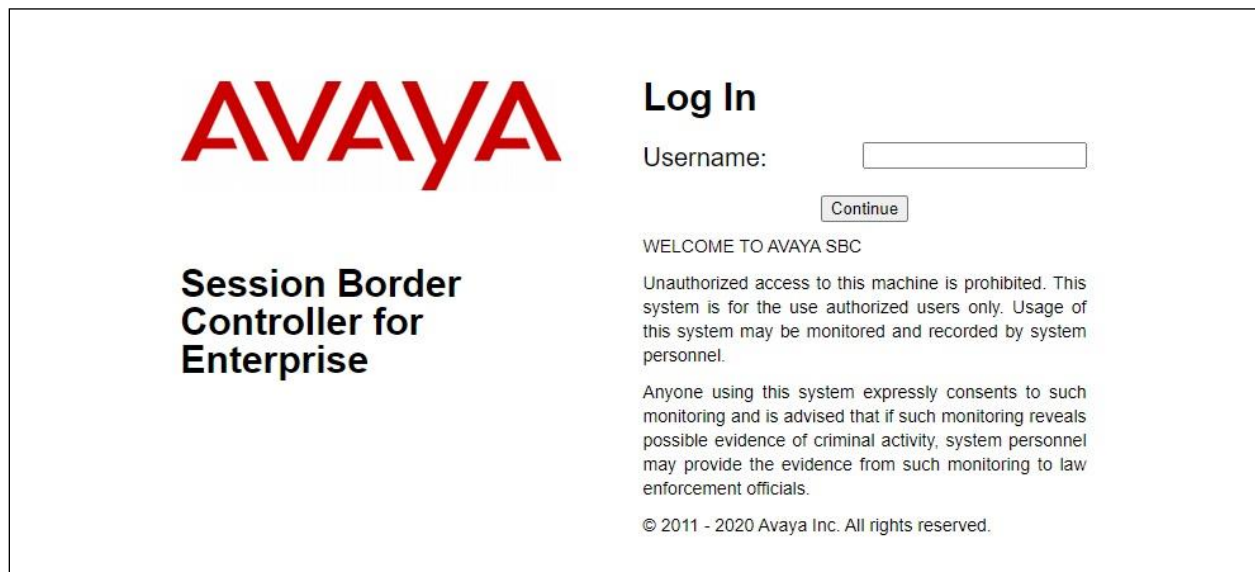
8. Configure Avaya Session Border Controller for Enterprise

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

- Launch web interface
- Administer SIP servers
- Administer routing
- Administer application rules
- Administer media rules
- Administer signaling rules
- Administer end point policy groups
- Administer recording profile
- Administer session policies
- Administer session flows
- Administer end point flows

8.1. Launch Web Interface

Access the SBCE web interface by using the URL “https://ip-address/sbc” in an Internet browser window, where “ip-address” is the IP address of the SBCE management interface. The screen below is displayed. Log in using the appropriate credentials.



The image shows the login page for the Avaya Session Border Controller for Enterprise (SBCE). On the left, the Avaya logo is displayed in red, with the text "Session Border Controller for Enterprise" below it. On the right, under the heading "Log In", there is a "Username:" label followed by a text input field. Below the input field is a "Continue" button. Further down, the text "WELCOME TO AVAYA SBC" is shown, followed by a disclaimer: "Unauthorized access to this machine is prohibited. This system is for the use authorized users only. Usage of this system may be monitored and recorded by system personnel." Below this is a consent statement: "Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence from such monitoring to law enforcement officials." At the bottom, the copyright notice "© 2011 - 2020 Avaya Inc. All rights reserved." is displayed.

8.2. Administer SIP Servers

In the subsequent screen, select **Device** → **SBCE** from the top menu, followed by **Backup/Restore** → **Services** → **SIP Servers** from the left pane to display the existing SIP server profiles. Click **Add** to add a SIP server profile for Uniphore.



The **Add Server Configuration Profile** pop-up screen is displayed. Enter a desired **Profile Name** as shown below.



The **Edit SIP Server Profile – General** pop-up screen is displayed. Click **Add** to add an entry and enter the following values for the specified fields and retain the default values for the remaining fields.

- **Server Type:** “Recording Server”
- **IP Address / FQDN:** IP address of Uniphone server with the OrkAudio component.
- **Port:** “5060”
- **Transport:** “TCP”

Edit SIP Server Profile - General

Server Type: Recording Server

SIP Domain:

DNS Query Type: NONE/A

TLS Client Profile: None

Add

IP Address / FQDN	Port	Transport
10.64.101.203	5060	TCP

Delete

Back Next

Navigate to the **Add SIP Server Profile - Advanced** screen. Retain the check in **Enable Grooming** and the default values in the remaining fields.

Add SIP Server Profile - Advanced

Enable Grooming: ☒

Interworking Profile: None

Signaling Manipulation Script: None

Securable: ☐

Enable FGDN: ☐

TCP Failover Port: 5060

TLS Failover Port: 5061

Tolerant: ☐

URI Group: None

Back Finish

8.3. Administer Routing

Select **Backup/Restore** → **Configuration Profiles** → **Routing** from the left pane to display the existing routing profiles. Click **Add** to add a routing profile for Uniphore.

The screenshot shows the 'Session Border Controller for Enterprise' interface. The top navigation bar includes 'Device: SBCE', 'Alarms', 'Incidents', 'Status', 'Logs', 'Diagnostics', 'Users', 'Settings', 'Help', and 'Log Out'. The left sidebar lists various configuration options, with 'Routing' highlighted in red. The main content area is titled 'Routing Profiles: default' and features an 'Add' button (highlighted with a red box) and a 'Clone' button. A warning message states: 'It is not recommended to edit the defaults. Try cloning or adding a new profile instead.' Below this, the 'Routing Profile' section displays a table with columns: Priority, URI Group, Time of Day, Load Balancing, Next Hop Address, and Transport. The table contains one row with the following values: Priority: 1, URI Group: *, Time of Day: default, Load Balancing: DNS/SRV, Next Hop Address: Auto-Detect, and Transport: Auto-Detect. There are 'Edit' and 'Delete' buttons for this row. An 'Add' button is also present in the top right of the table area.

Priority	URI Group	Time of Day	Load Balancing	Next Hop Address	Transport
1	*	default	DNS/SRV	Auto-Detect	Auto-Detect

The **Routing Profile** pop-up screen is displayed. Enter a desired **Profile Name** as shown below.

The screenshot shows the 'Routing Profile' pop-up screen. It has a title bar with 'Routing Profile' and a close button. The main area contains a 'Profile Name' label and a text input field with the value 'Uniphore-Route'. Below the input field is a 'Next' button.

The **Routing Profile** pop-up screen is updated. Click **Add** to add a next hop entry. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Priority / Weight:** The highest priority of “1”.
- **SIP Server Profile:** Select the Uniphore SIP server profile from **Section 8.2**.
- **Next Hop Address:** Retain the auto populated value.

The screenshot shows the 'Routing Profile' configuration window. At the top, there are tabs for Device: SBCE, Alarms, Incidents, Status, Logs, Diagnostics, and Users. The 'Routing Profile' window has a close button (X) in the top right corner. The main configuration area includes the following fields:

- URI Group: *
- Load Balancing: Priority
- Transport: None
- LDAP Server Profile: None
- Matched Attribute Priority: ☒
- Next Hop Priority: ☒
- Ignore Route Header: ☐
- Time of Day: default
- NAPTR: ☐
- LDAP Routing: ☐
- LDAP Base DN (Search): None
- Alternate Routing: ☒
- Next Hop In-Dialog: ☐
- ENUM: ☐
- ENUM Suffix:

Below the configuration fields is an 'Add' button. At the bottom, there is a table for adding next hop entries:

Priority / Weight	LDAP Search Attribute	LDAP Search Regex Pattern	LDAP Search Regex Result	SIP Server Profile	Next Hop Address	Transport	
1				Uniphore-Server	10.64.101.203:5060 (TCP)	None	Delete

At the bottom of the table, there are 'Back' and 'Finish' buttons.

8.4. Administer Application Rules

Select **Backup/Restore** → **Domain Policies** → **Application Rules** from the left pane to display the existing application rules. Click **Add** to add an application rule for Uniphore.

The screenshot shows the Avaya Session Border Controller for Enterprise web interface. The top navigation bar includes links for Device: SBCE, Alarms, Incidents, Status, Logs, Diagnostics, Users, Settings, Help, and Log Out. The main header displays "Session Border Controller for Enterprise" and the Avaya logo. On the left, a navigation pane lists various configuration options, with "Domain Policies" expanded and "Application Rules" highlighted. In the center, the "Application Rules: default" section is visible, featuring an "Add" button (highlighted with a red box) and a "Clone" button. A warning message states: "It is not recommended to edit the defaults. Try cloning or adding a new rule instead." Below this, a table titled "Application Rule" displays the following data:

Application Type	In	Out	Maximum Concurrent Sessions	Maximum Sessions Per Endpoint
Audio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	200	5
Video	<input type="checkbox"/>	<input type="checkbox"/>		

The **Application Rule** pop-up screen is displayed. Enter a desired **Rule Name** as shown below.

The screenshot shows the Avaya Session Border Controller for Enterprise web interface with the "Application Rule" pop-up screen displayed. The pop-up screen has a title bar with "Application Rule" and a close button (X). It contains a "Rule Name" input field with the text "Uniphore-Application" and a "Next" button. The background shows the same web interface as the previous screenshot, with the "Application Rules: default" section visible.

The **Application Rule** pop-up screen is updated. Check **Audio In** and **Audio Out**, and enter desired values for **Maximum Concurrent Sessions** and **Maximum Sessions Per Endpoint**, as shown below. Retain the default values in the remaining fields.

Application Type	In	Out	Maximum Concurrent Sessions	Maximum Sessions Per Endpoint
Audio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	100	10
Video	<input type="checkbox"/>	<input type="checkbox"/>		

Miscellaneous

CDR Support: ☒ Off, ☐ RADIUS, ☐ CDR Adjunct

RADIUS Profile: None

Media Statistics Support: ☐

Call Duration: ☒ Setup, ☐ Connect

RTCP Keep-Alive: ☐

Back Finish

8.5. Administer Media Rules

Select **Backup/Restore** → **Domain Policies** → **Media Rules** from the left pane to display the existing media rules. Click **Add** to add a media rule for Uniphore.

Media Rules: default-low-med

Add Clone

It is not recommended to edit the defaults. Try cloning or adding a new rule instead.

Encryption Codec Prioritization Advanced QoS

Audio Encryption

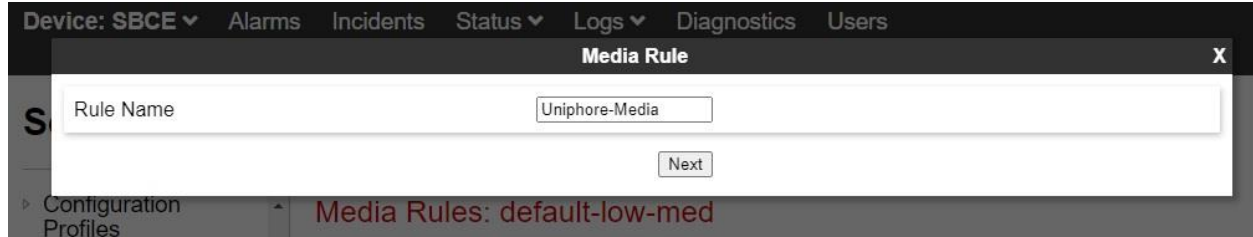
Preferred Formats RTP

Interworking ☒

Video Encryption

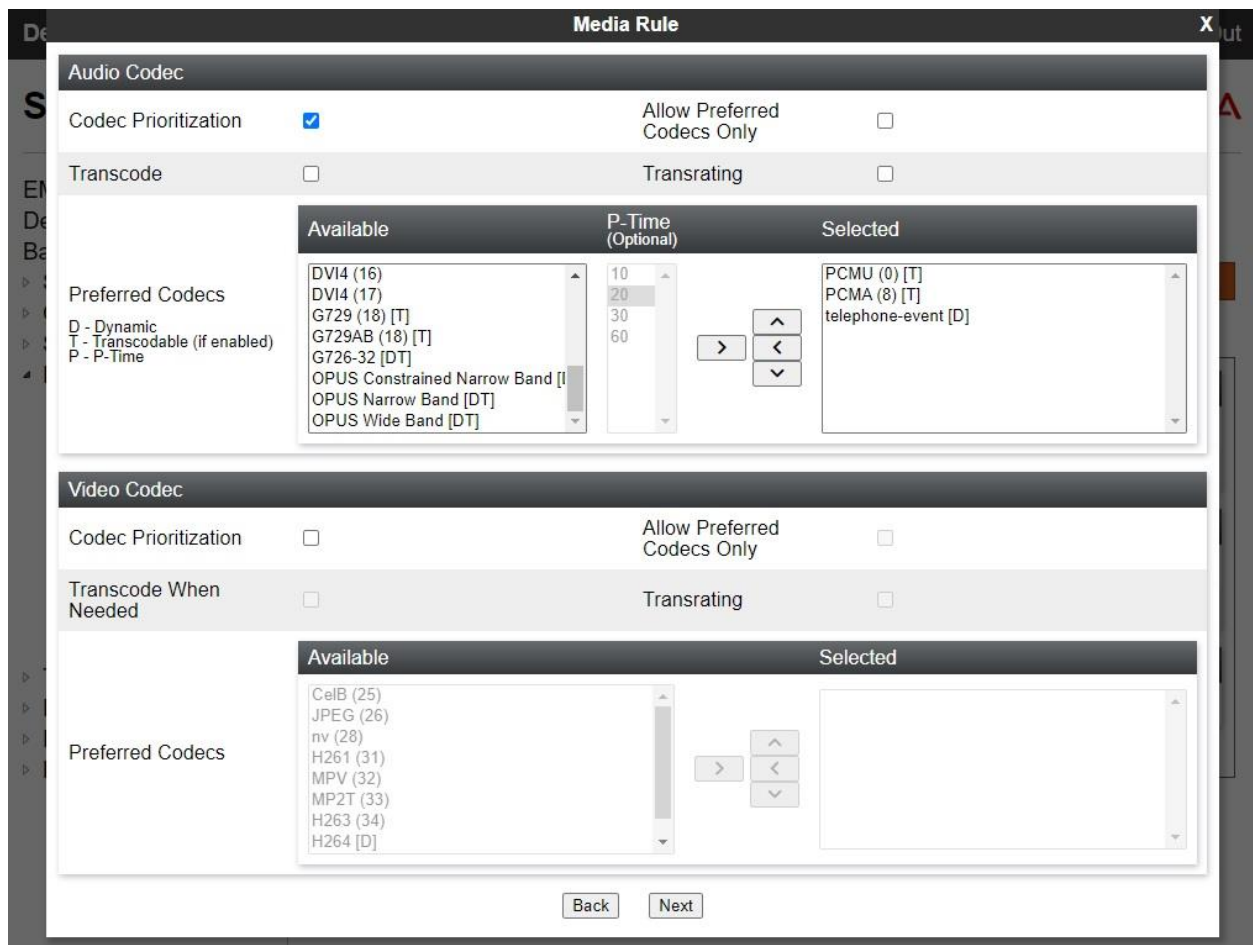
Preferred Formats RTP

The **Media Rule** pop-up screen is displayed. Enter a desired **Rule Name** as shown below.



The screenshot shows a 'Media Rule' pop-up window. At the top, there's a navigation bar with 'Device: SBCE' and tabs for 'Alarms', 'Incidents', 'Status', 'Logs', 'Diagnostics', and 'Users'. The main area has a 'Rule Name' input field containing 'Uniphore-Media' and a 'Next' button. Below the input field, there's a section for 'Configuration Profiles' with a dropdown menu showing 'Media Rules: default-low-med'.

The **Media Rule** pop-up screen is updated. Navigate to the **Audio Codec** page. Select the relevant codecs from the **Available** column to the **Selected** column, as shown below. Retain the default values in all remaining fields and pages.



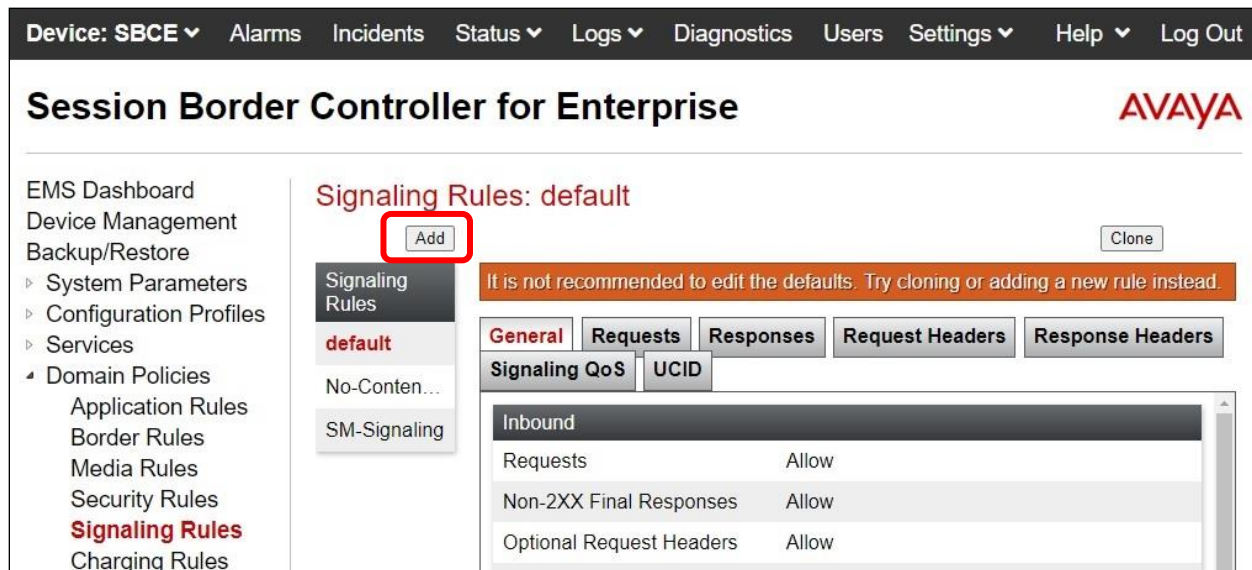
The screenshot shows the 'Media Rule' pop-up window with the 'Audio Codec' section selected. The 'Audio Codec' section has a 'Preferred Codecs' list with a legend: D - Dynamic, T - Transcodable (if enabled), P - P-Time. The 'Available' column lists codecs: DVI4 (16), DVI4 (17), G729 (18) [T], G729AB (18) [T], G726-32 [DT], OPUS Constrained Narrow Band [I], OPUS Narrow Band [DT], and OPUS Wide Band [DT]. The 'P-Time (Optional)' column has a dropdown menu with values 10, 20, 30, and 60. The 'Selected' column lists: PCMU (0) [T], PCMA (8) [T], and telephone-event [D]. The 'Video Codec' section is also visible, with a 'Preferred Codecs' list and an 'Available' column listing: CelB (25), JPEG (26), nv (28), H261 (31), MPV (32), MP2T (33), H263 (34), and H264 [D]. The 'Selected' column is empty. At the bottom, there are 'Back' and 'Next' buttons.

8.6. Administer Signaling Rules

Select **Backup/Restore** → **Domain Policies** → **Signaling Rules** from the left pane to display the existing signaling rules.

8.6.1. Uniphore Signaling Rule

Click **Add** to add a signaling rule for Uniphore.



The **Signaling Rule** pop-up screen is displayed. Enter a desired **Rule Name** as shown below.



The **Signaling Rule** pop-up screen is updated. Navigate to the **UCID** page. Check **Enabled**. For **Node ID**, enter a unique number across the customer system, in this case "14". Retain the default value in the remaining field.



8.6.2. Session Manager Signaling Rule

Select the existing signaling rule for Session Manager, in this case **SM-signaling**. Select the **UCID** tab. Make certain that **UCID** is checked, and that **Node ID** is configured with a unique number across the customer system, as shown below.

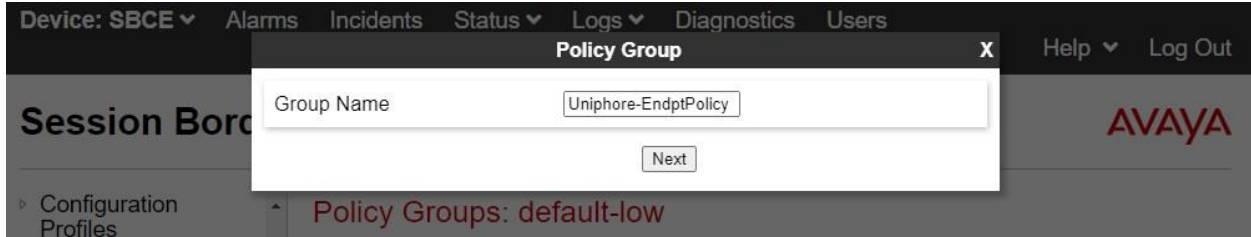
The screenshot shows the Avaya Controller for Enterprise interface. The top navigation bar includes Incidents, Status, Logs, Diagnostics, Users, Settings, Help, and Log Out. The main header displays "Controller for Enterprise" and the Avaya logo. The left sidebar lists "Signaling Rules" with options: default, No-Content-Typ..., SM-Signaling (highlighted), and Uniphore-signali... The main content area is titled "Signaling Rules: SM-Signaling" and includes buttons for Add, Rename, Clone, and Delete. A blue bar prompts to "Click here to add a description." Below this are tabs for General, Requests, Responses, Request Headers, Response Headers, Signaling QoS, and UCID (selected). The UCID tab shows a table with columns UCID, Node ID, and Protocol Discriminator. The UCID checkbox is checked, Node ID is 11, and Protocol Discriminator is 0x00. An Edit button is at the bottom right.

8.7. Administer End Point Policy Groups

Select **Backup/Restore** → **Domain Policies** → **End Point Policy Groups** from the left pane to display the existing policy groups. Click **Add** to add a policy group for Uniphore.

The screenshot shows the Avaya Session Border Controller for Enterprise interface. The top navigation bar includes Device: SBCE, Alarms, Incidents, Status, Logs, Diagnostics, Users, Settings, Help, and Log Out. The main header displays "Session Border Controller for Enterprise" and the Avaya logo. The left sidebar lists various management options, with "Domain Policies" expanded to show "End Point Policy Groups" (highlighted). The main content area is titled "Policy Groups: default-low" and includes an Add button (circled in red) and a Clone button. A warning message states: "It is not recommended to edit the defaults. Try cloning or adding a new group instead." Below this is a blue bar prompting to "Hover over a row to see its description." A table titled "Policy Group" is shown with a Summary button. The table has columns: Order, Application, Border, Media, Security, Signaling, Charging, and RTCP Mon Gen. The first row shows Order 1, Application default, Border default, Media default-low-med, Security default-low, Signaling default, Charging None, and RTCP Mon Gen Off.

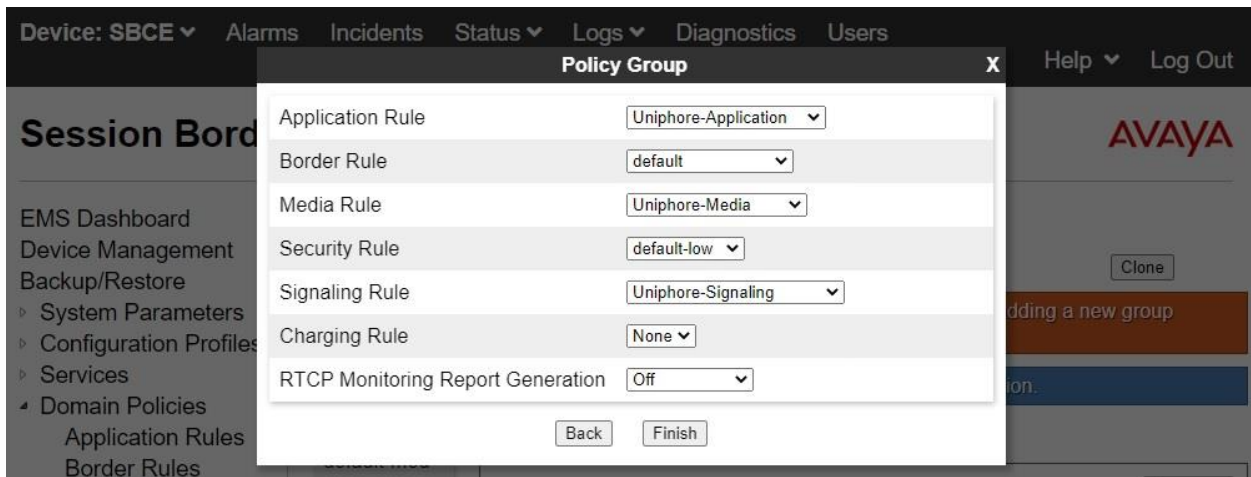
The **Policy Group** pop-up screen is displayed. Enter a desired **Group Name** as shown below.



The screenshot shows the 'Policy Group' pop-up window. The 'Group Name' field is populated with 'Uniphore-EndptPolicy'. A 'Next' button is visible at the bottom of the pop-up. The background shows the Avaya Session Border Controller interface with a sidebar menu and a top navigation bar.

The **Policy Group** pop-up screen is updated. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Application Rule:** Select the Uniphore application rule from **Section 8.4**.
- **Media Rule:** Select the Uniphore media rule from **Section 8.5**.
- **Signaling Rule:** Select the Uniphore signaling rule from **Section 8.6.1**.



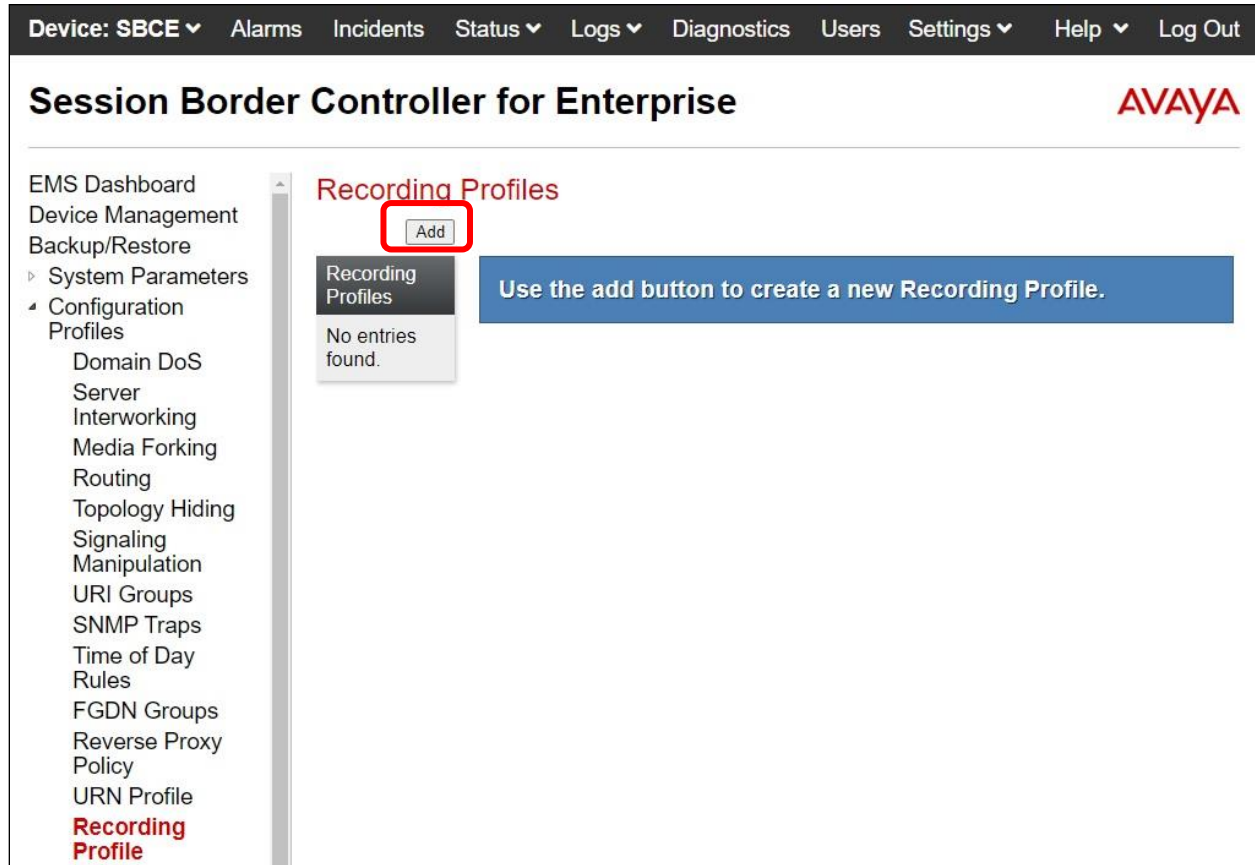
The screenshot shows the 'Policy Group' pop-up window with the following settings:

Field	Value
Application Rule	Uniphore-Application
Border Rule	default
Media Rule	Uniphore-Media
Security Rule	default-low
Signaling Rule	Uniphore-Signaling
Charging Rule	None
RTCP Monitoring Report Generation	Off

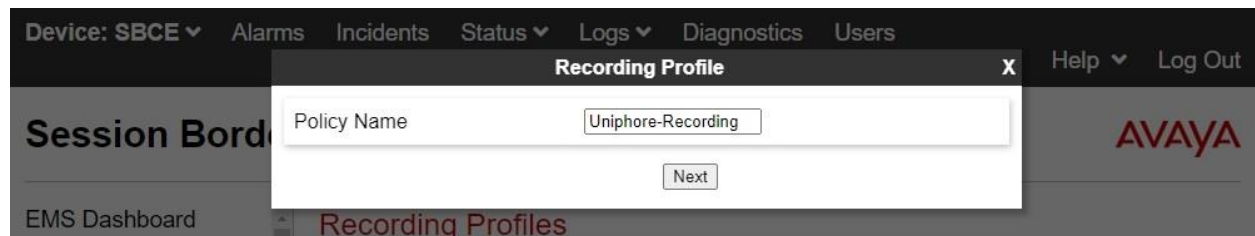
Buttons: Back, Finish

8.8. Administer Recording Profile

Select **Backup/Restore** → **Configuration Profiles** → **Recording Profile** from the left pane to display the existing profiles. Click **Add** to add a recording profile for Uniphore.



The **Policy Group** pop-up screen is displayed. Enter a desired **Group Name** as shown below.



The **Recording Profile** pop-up screen is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Play Recording Tone:** Check this field if customer desires recording tone to be played.
- **Routing Profile:** Select the Uniphore routing profile from **Section 8.3**.
- **Recording Type:** “Full Time”

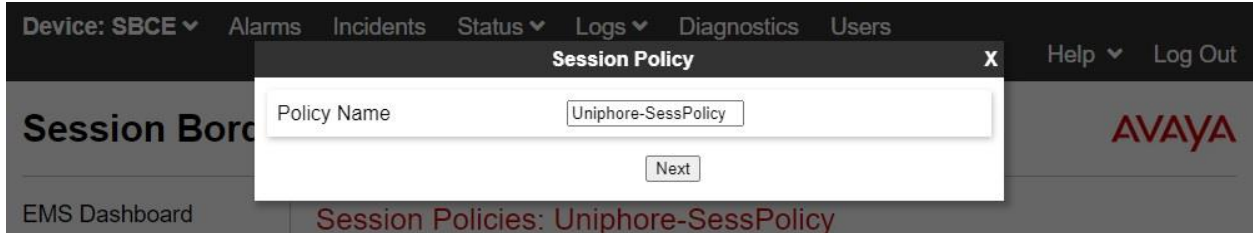
The screenshot shows the 'Recording Profile' pop-up window. It has a dark header with 'Recording Profile' and a close button 'x'. Below the header, there are two rows of settings: 'Call Termination on Recording Failure' with an unchecked checkbox, and 'Play Recording Tone' with an unchecked checkbox. An 'Add' button is to the right of these settings. Below this is a table with three columns: 'Routing Profile', 'Recording Type', and 'Video Recording'. The 'Routing Profile' column has a dropdown menu showing 'Uniphore-Route'. The 'Recording Type' column has a dropdown menu showing 'Full Time'. The 'Video Recording' column has an unchecked checkbox. A 'Delete' button is to the right of the table. At the bottom of the table is a 'Finish' button. The background shows the main interface with a sidebar on the left containing 'Session Border Controller for Enterprise' and various navigation options like 'EMS Dashboard', 'Device Management', 'Backup/Restore', 'System Parameters', 'Configuration Profiles', 'Domain DoS', 'Session Policies', and 'TLS Management'. The top navigation bar includes 'Device: SBCE', 'Alarms', 'Incidents', 'Status', 'Logs', 'Diagnostics', 'Users', 'Help', and 'Log Out'.

8.9. Administer Session Policies

Select **Backup/Restore** → **Domain Policies** → **Session Policies** from the left pane to display the existing session policies. Click **Add** to add a session policy for Uniphore.

The screenshot shows the 'Session Policies: default' screen. The left sidebar contains the navigation menu with 'Session Policies' highlighted. The main content area has a header 'Session Policies: default' with an 'Add' button (circled in red) and a 'Clone' button. Below the header is a warning message: 'It is not recommended to edit the defaults. Try cloning or adding a new policy instead.' Below the warning is a table with two columns: 'Media' and 'URN Profile'. The 'Media' column has a dropdown menu showing 'Media Anchoring'. The 'URN Profile' column has a dropdown menu showing 'None'. Below the table is an 'Edit' button. The background shows the main interface with a sidebar on the left containing 'Session Border Controller for Enterprise' and various navigation options like 'EMS Dashboard', 'Device Management', 'Backup/Restore', 'System Parameters', 'Configuration Profiles', 'Domain Policies', 'Application Rules', 'Border Rules', 'Media Rules', 'Security Rules', 'Signaling Rules', 'Charging Rules', 'End Point Policy Groups', 'Session Policies', and 'TLS Management'. The top navigation bar includes 'Device: SBCE', 'Alarms', 'Incidents', 'Status', 'Logs', 'Diagnostics', 'Users', 'Settings', 'Help', and 'Log Out'.

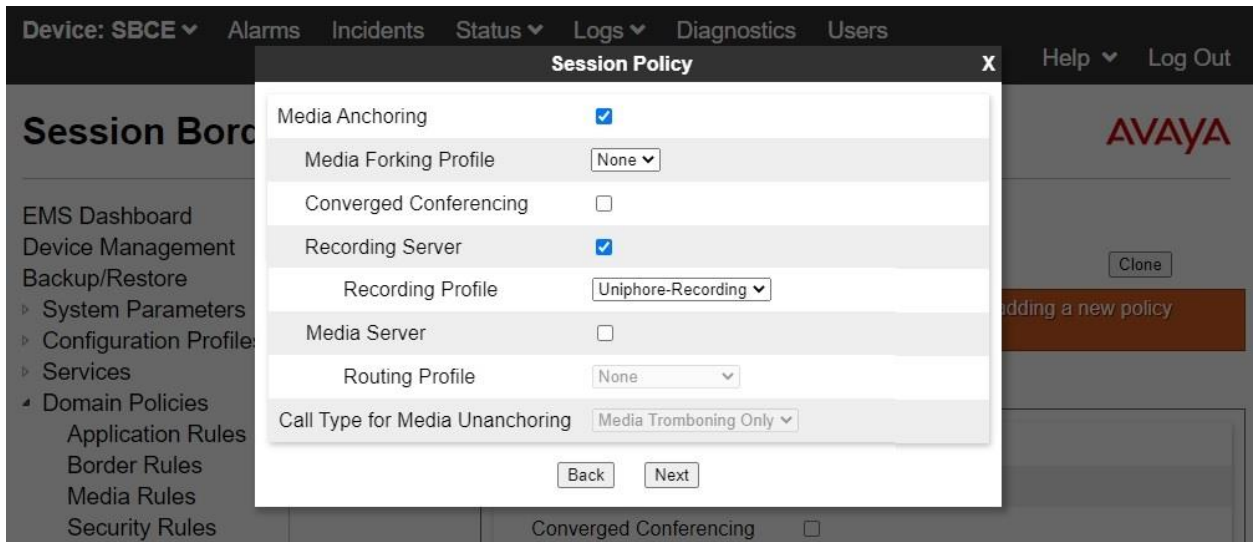
The **Session Policy** pop-up screen is displayed. Enter a desired **Policy Name** as shown below.



The screenshot shows the 'Session Policy' pop-up window. The 'Policy Name' field is populated with 'Uniphore-SessPolicy'. A 'Next' button is visible at the bottom of the pop-up. The background shows the 'Session Board' interface with the AVAYA logo and a breadcrumb trail: EMS Dashboard > Session Policies: Uniphore-SessPolicy.

The **Session Policy** pop-up screen is updated. Enter the following values for the specified fields and retain the default values for the remaining fields.

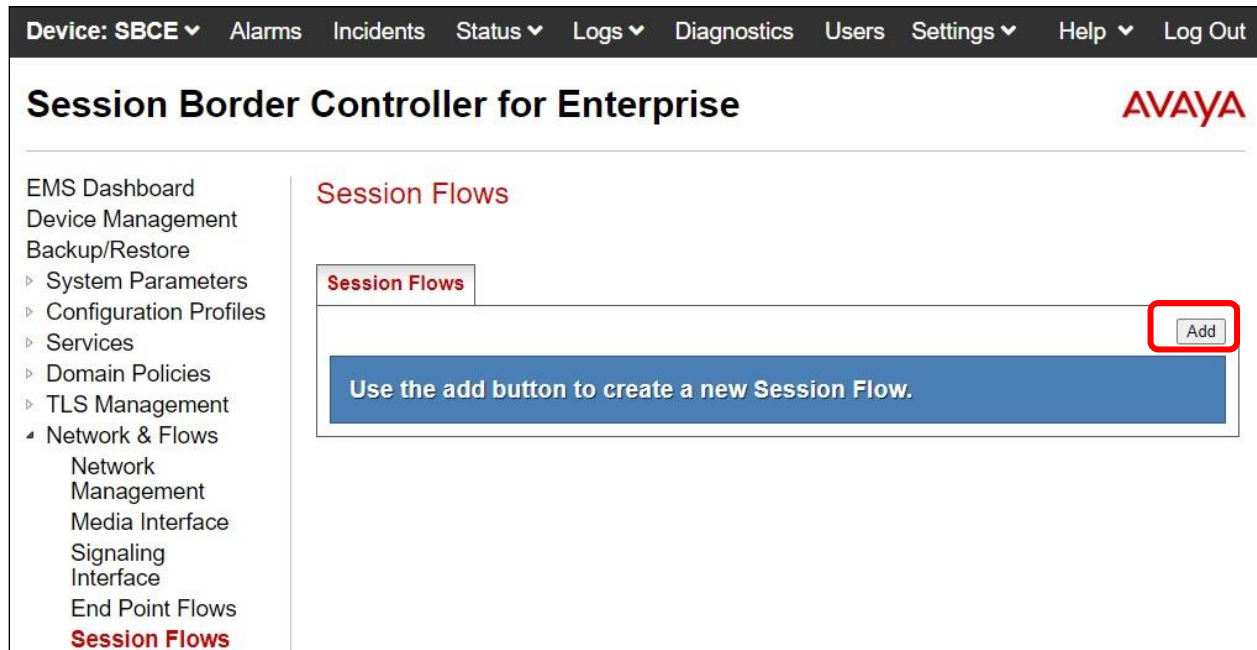
- **Media Anchoring:** Check this field.
- **Recording Server:** Check this field.
- **Recording Profile:** Select the Uniphore recording profile from **Section 8.8**.



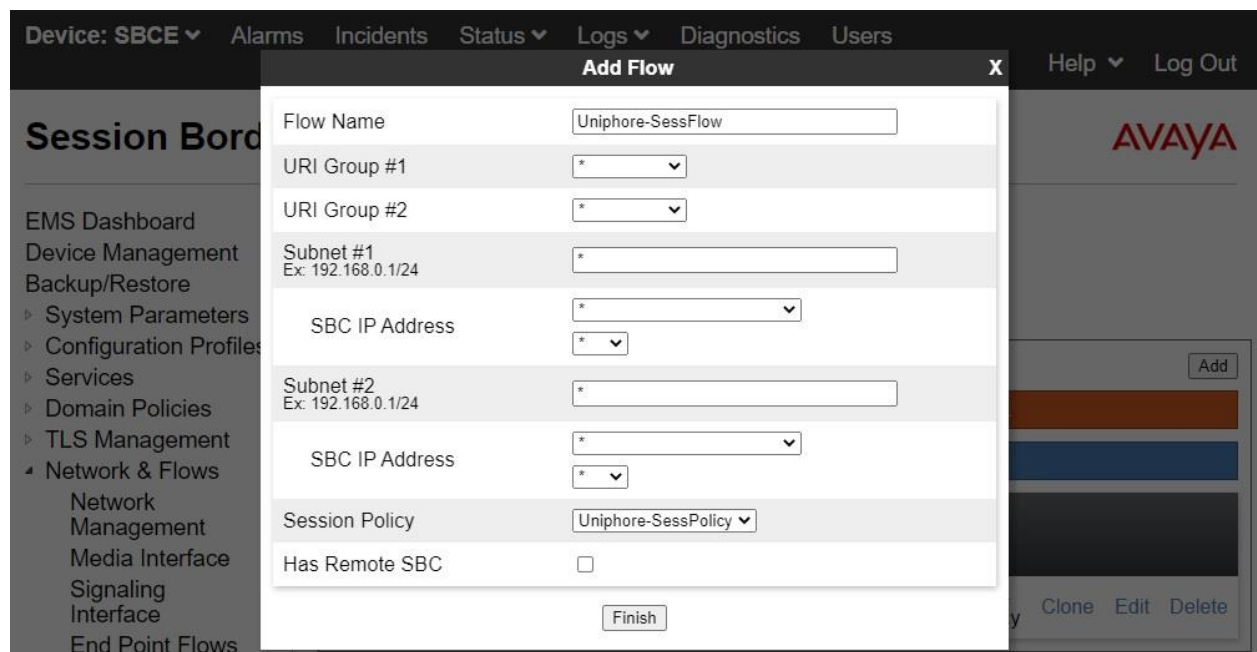
The screenshot shows the 'Session Policy' pop-up window with the following configurations: 'Media Anchoring' is checked; 'Media Forking Profile' is set to 'None'; 'Converged Conferencing' is unchecked; 'Recording Server' is checked; 'Recording Profile' is set to 'Uniphore-Recording'; 'Media Server' is unchecked; 'Routing Profile' is set to 'None'; and 'Call Type for Media Unanchoring' is set to 'Media Tromboning Only'. 'Back' and 'Next' buttons are at the bottom. The background shows the 'Session Board' interface with the AVAYA logo and a breadcrumb trail: EMS Dashboard > Device Management > Backup/Restore > System Parameters > Configuration Profile > Services > Domain Policies > Application Rules > Border Rules > Media Rules > Security Rules. A 'Clone' button and a message 'Adding a new policy' are also visible.

8.10. Administer Session Flows

Select **Backup/Restore** → **Network & Flows** → **Session Flows** from the left pane to display the existing session flows. Click **Add** to add a session flow for Uniphore.



The **Add Flow** pop-up screen is displayed. For **Flow Name**, enter a desired name. For **Session Policy**, select the Uniphore session policy from **Section 8.9**. Retain the default values in the remaining fields.



8.11. Administer End Point Flows

Select **Backup/Restore** → **Network & Flows** → **End Point Flows** from the left pane. Select the **Server Flows** tab and click **Add** to add a server flow for Uniphore.

Device: SBCE ▾ Alarms Incidents Status ▾ Logs ▾ Diagnostics Users Settings ▾ Help ▾ Log Out

Session Border Controller for Enterprise

AVAYA

EMS Dashboard
Device Management
Backup/Restore
▸ System Parameters
▸ Configuration Profiles
▸ Services
▸ Domain Policies
▸ TLS Management
▸ Network & Flows
 Network Management
 Media Interface
 Signaling Interface
 End Point Flows
 Session Flows
 Advanced Options
▸ DMZ Services
▸ Monitoring & Logging

End Point Flows

Subscriber Flows **Server Flows**

Add

Modifications made to a Server Flow will only take effect on new sessions.

Hover over a row to see its description.

SIP Server: EXT-server

Priority	Flow Name	URI Group	Received Interface	Signaling Interface	End Point Policy Group	Routing Profile	
1	EXT-Flow	*	Private-Signaling	Public-Signaling	default-low	SM-Route	View Clone Edit Delete

SIP Server: SM-server

Priority	Flow Name	URI Group	Received Interface	Signaling Interface	End Point Policy Group	Routing Profile	
1	SM-Flow	*	Public-Signaling	Private-Signaling	default-low	EXT-Route	View Clone Edit Delete

The **Add Flow** pop-up screen is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Flow Name:** A descriptive name.
- **SIP Server Profile:** The Uniphore SIP server profile from **Section 8.2**.
- **Received Interface:** The external signaling interface in this case “Public-Signaling”.
- **Signaling Interface:** The internal signaling interface in this case “Private-Signaling”.
- **Media Interface:** The internal media interface in this case “Private-Media”.
- **End Point Policy Group:** The Uniphore end point policy group from **Section 8.7**.

The screenshot shows the 'Add Flow' pop-up screen in the Avaya Session Border Controller (SBCE) management interface. The form contains the following fields and values:

Field	Value
Flow Name	Uniphore-Flow
SIP Server Profile	Uniphore-Server
URI Group	*
Transport	*
Remote Subnet	*
Received Interface	Public-Signaling
Signaling Interface	Private-Signaling
Media Interface	Private-Media
Secondary Media Interface	None
End Point Policy Group	Uniphore-EndptPolicy
Routing Profile	default
Topology Hiding Profile	None
Signaling Manipulation Script	None
Remote Branch Office	Any
Link Monitoring from Peer	<input type="checkbox"/>

A 'Finish' button is located at the bottom of the form.

9. Configure Uniphore Real Intent

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

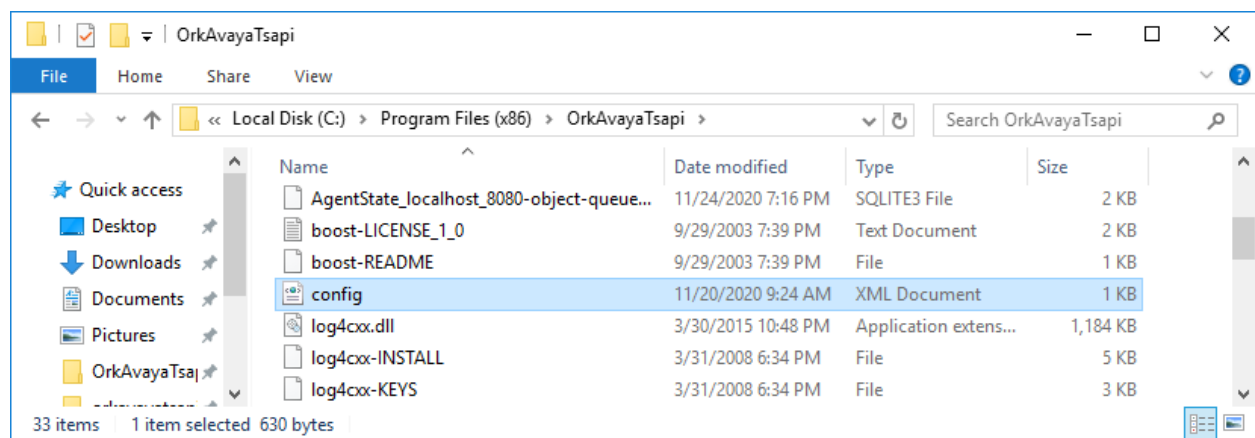
- Administer OrkAvayaTsapi
- Prepare agent user CSV file
- Launch Swagger web interface
- Import agent user CSV file

The configuration of Real Intent performed by Uniphore Services. The procedural steps are presented in these Application Notes for informational purposes.

Prior to configuration, an organizational name is assumed to be pre-configured.

9.1. Administer OrkAvayaTsapi

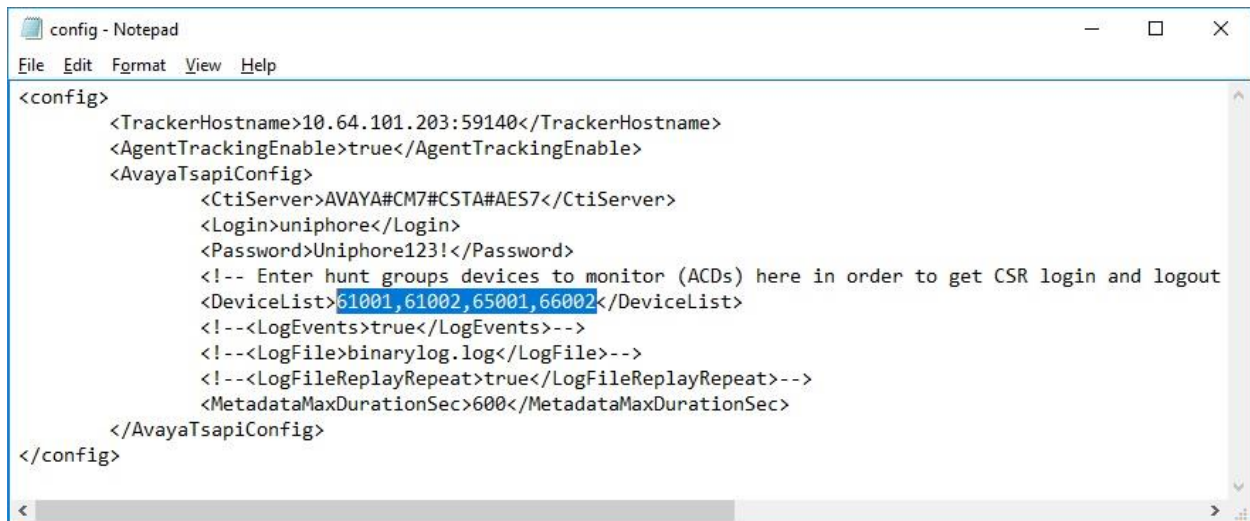
From the Real Intent server running the OrkAvayaTsapi component, navigate to the **C:\Program Files (x86)\OrkAvayaTsapi** directory and edit the **config** file shown below.



Enter the following values for the specified fields and retain the default values for the remaining fields.

- **TrackerHostname:** “x:y” where “x” is IP address of this server and “y” is port “59140”.
- **CtiServer:** The Tlink name from **Section 6.7**.
- **Login:** The Uniphore user credential from **Section 6.4**.
- **Password:** The Uniphore user credential from **Section 6.4**.
- **DeviceList:** Extension of skill groups and agent stations to monitor from **Section 3**.

Add the **AgentTrackingEnable** parameter and set to “true” as shown below.

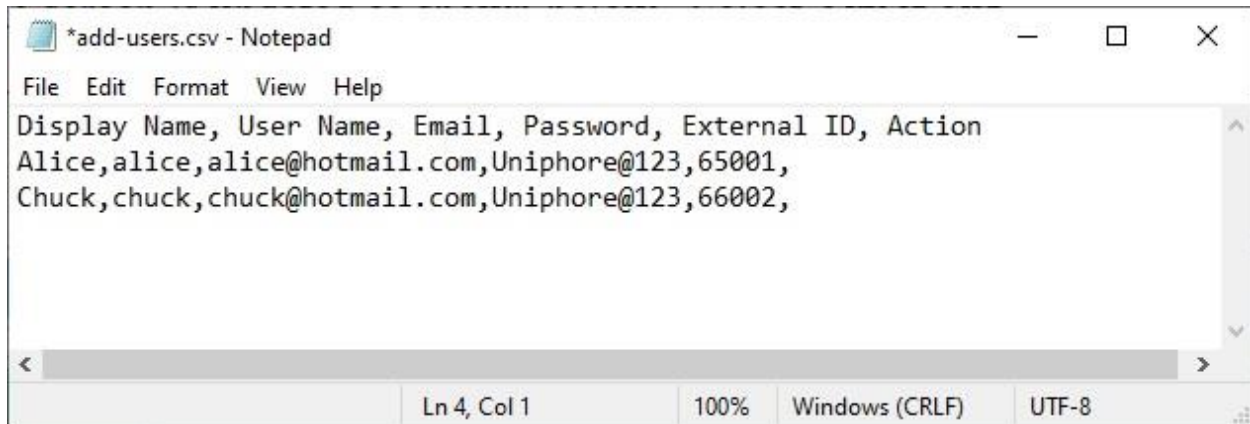


```
<config>
  <TrackerHostname>10.64.101.203:59140</TrackerHostname>
  <AgentTrackingEnable>true</AgentTrackingEnable>
  <AvayaTsapiConfig>
    <CtiServer>AVAYA#CM7#CSTA#AES7</CtiServer>
    <Login>uniphore</Login>
    <Password>Uniphore123!</Password>
    <!-- Enter hunt groups devices to monitor (ACDs) here in order to get CSR login and logout
    <DeviceList>61001,61002,65001,66002</DeviceList>
    <!-->
    <LogEvents>true</LogEvents>-->
    <!-->
    <LogFile>binarylog.log</LogFile>-->
    <LogFileReplayRepeat>true</LogFileReplayRepeat>-->
    <MetadataMaxDurationSec>600</MetadataMaxDurationSec>
  </AvayaTsapiConfig>
</config>
```


9.2. Prepare Agent User CSV File

Follow reference [4] to prepare an agent user file in the CSV format shown below, which will be used later to import into Real Intent. Note that the actual file name can vary.

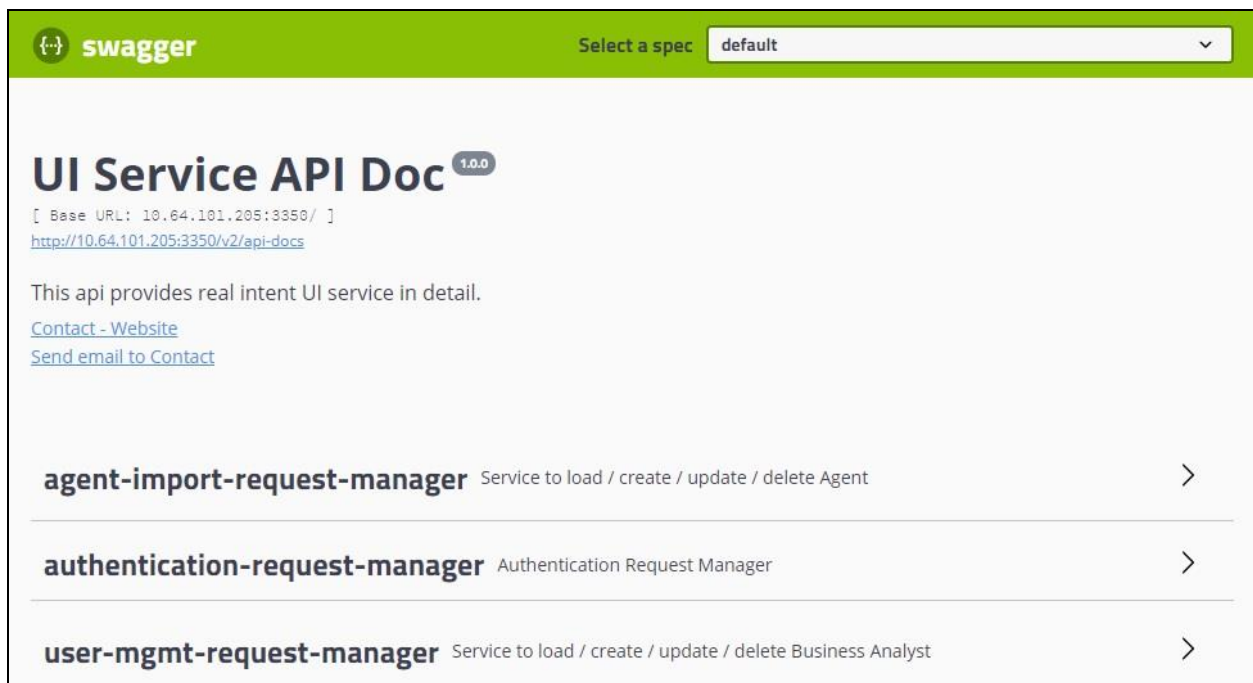
In the compliance testing, two agent user entries were created in the CSV file to correspond to the two agent users from **Section 3**.



```
*add-users.csv - Notepad
File Edit Format View Help
Display Name, User Name, Email, Password, External ID, Action
Alice,alice,alice@hotmail.com,Uniphore@123,65001,
Chuck,chuck,chuck@hotmail.com,Uniphore@123,66002,
```

9.3. Launch Swagger Web Interface

Access the Swagger web interface by using the URL “http://ip-address:3350/swagger-ui.html” in an Internet browser window, where “ip-address” is the IP address of the Real Intent server with the User Management Service component. The screen below is displayed.



9.4. Import Agent User CSV File

Expand the **agent-import-request-manager** section and select **POST**.

agent-import-request-manager Service to load / create / update / delete Agent ▼

GET /config/user-mgmt/agent-detail/{orgName} agentList

POST /config/user-mgmt/agent-detail/{orgName} uploadCSVFile

GET /config/user-mgmt/agent/template agentCSVTemplate

authentication-request-manager Authentication Request Manager >

The screen is updated as shown below. Select **Try it out**.

agent-import-request-manager Service to load / create / update / delete Agent ▼

GET /config/user-mgmt/agent-detail/{orgName} agentList

POST /config/user-mgmt/agent-detail/{orgName} uploadCSVFile

Parameters Try it out

Name	Description
file * required file (formData)	file
orgName * required string (path)	orgName

The screen is updated as shown below. For **file**, select **Choose File** and navigate to the agent user CSV file from **Section 9.2**.

Select **Execute**.

The screenshot displays the 'agent-import-request-manager' web interface. At the top, it shows the title 'agent-import-request-manager' and a subtitle 'Service to load / create / update / delete Agent'. Below this, there are two tabs: 'GET' and 'POST'. The 'POST' tab is selected, showing the endpoint '/config/user-mgmt/agent-detail/{orgName}' and the action 'uploadCSVFile'. Under the 'Parameters' section, there are two input fields: 'file' and 'orgName'. The 'file' field is marked as 'required' and has a 'Choose File' button next to it, with the filename 'add-users.csv' displayed. The 'orgName' field is also marked as 'required' and contains the text 'B And E Group Pvt Ltd'. Below the parameters, there are 'Execute' and 'Clear' buttons. The 'Responses' section shows the 'Response content type' as '*/'. At the bottom, there is a 'Curl' section with a pre-formatted curl command for the POST request.

agent-import-request-manager Service to load / create / update / delete Agent

GET /config/user-mgmt/agent-detail/{orgName} agentList

POST /config/user-mgmt/agent-detail/{orgName} uploadCSVFile

Parameters Cancel

Name	Description
file * required file (formData)	file Choose File add-users.csv
orgName * required string (path)	orgName B And E Group Pvt Ltd

Execute Clear

Responses Response content type */*

Curl

```
curl -X POST "http://10.64.101.205:3350/config/user-mgmt/agent-detail/B%20And%20E%20Group%20Pvt%20Ltd" -H "accept: */*" -H "Content-Type: multipart/form-data" -F "file=@delete-users.csv;type=application/vnd.ms-excel"
```


10. Verification Steps

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

10.1. Verify TSAPI Connection

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

Verify that **Status** is “Talking” for the TSAPI link administered in **Section 6.3**, and that the **Associations** column reflects the total number of monitored skill groups and agent stations from **Section 3**, in this case “4”.

 **Application Enablement Services**
Management Console

Welcome: User
Last login: Wed Mar 17 14:04:47 2021 from 192.168.200.20
Number of prior failed login attempts: 0
HostName/IP: aes7/10.64.101.239
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.3.0.0.25-0
Server Date and Time: Wed Mar 17 14:29:00 EDT 2021
HA Status: Not Configured

Status | Status and Control | TSAPI Service Summary

Home | Help | Logout

▶ AE Services

▶ Communication Manager Interface

▶ High Availability

▶ Licensing

▶ Maintenance

▶ Networking

▶ Security

▼ Status

Alarm Viewer

▶ Logs

▶ Log Manager

▼ Status and Control

■ CVLAN Service Summary

■ DLG Services Summary

■ DMCC Service Summary

■ Switch Conn Summary

■ TSAPI Service Summary

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
<input checked="" type="radio"/>	1	cm7	1	Talking	Mon Mar 8 11:39:08 2021	Online	18	4	26	21	30

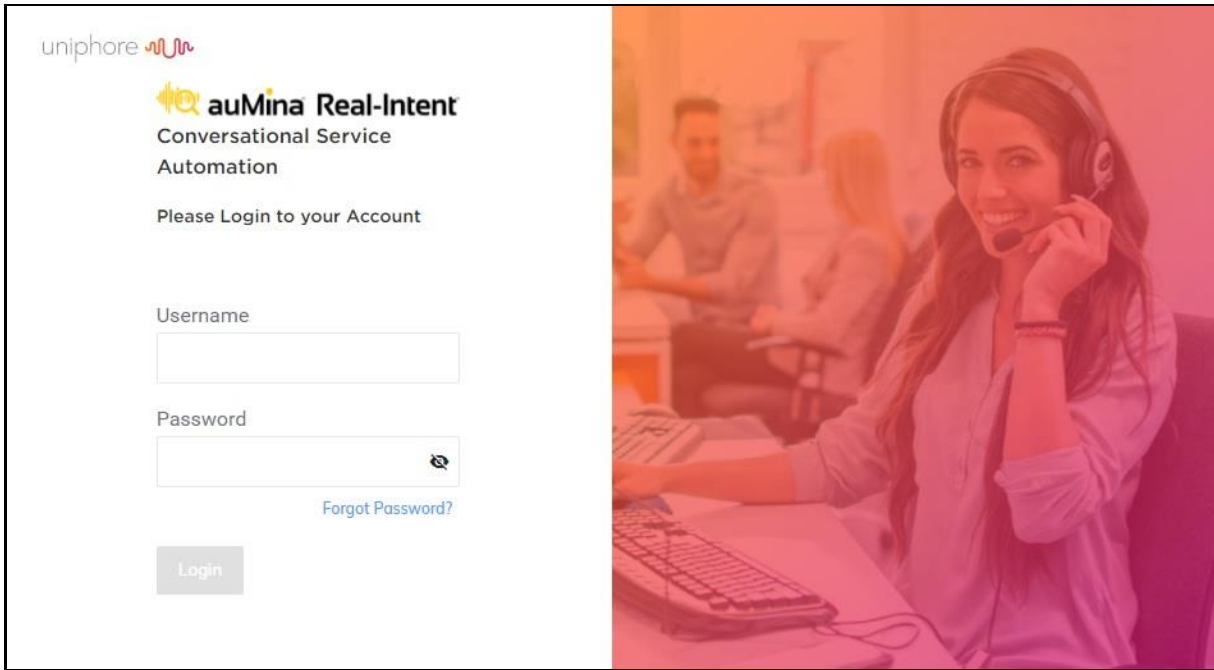
Online Offline

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

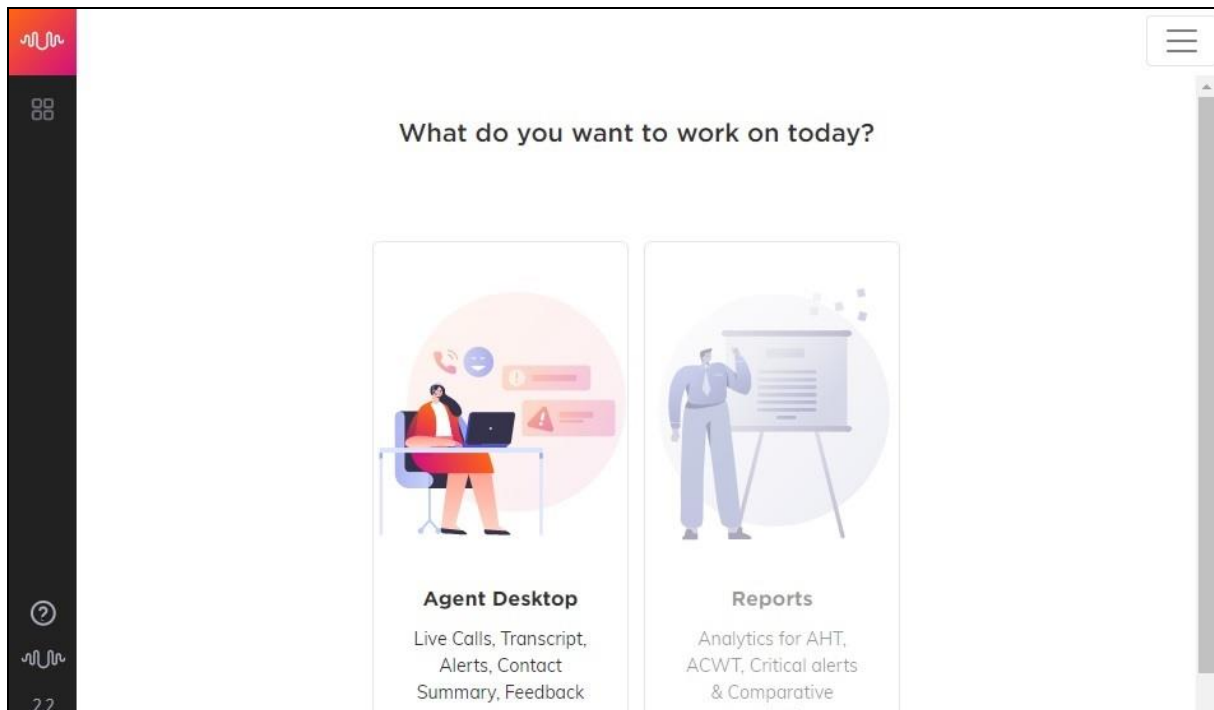
TSAPI Service Status TLink Status User Status

10.2. Verify SIPREC Transcription

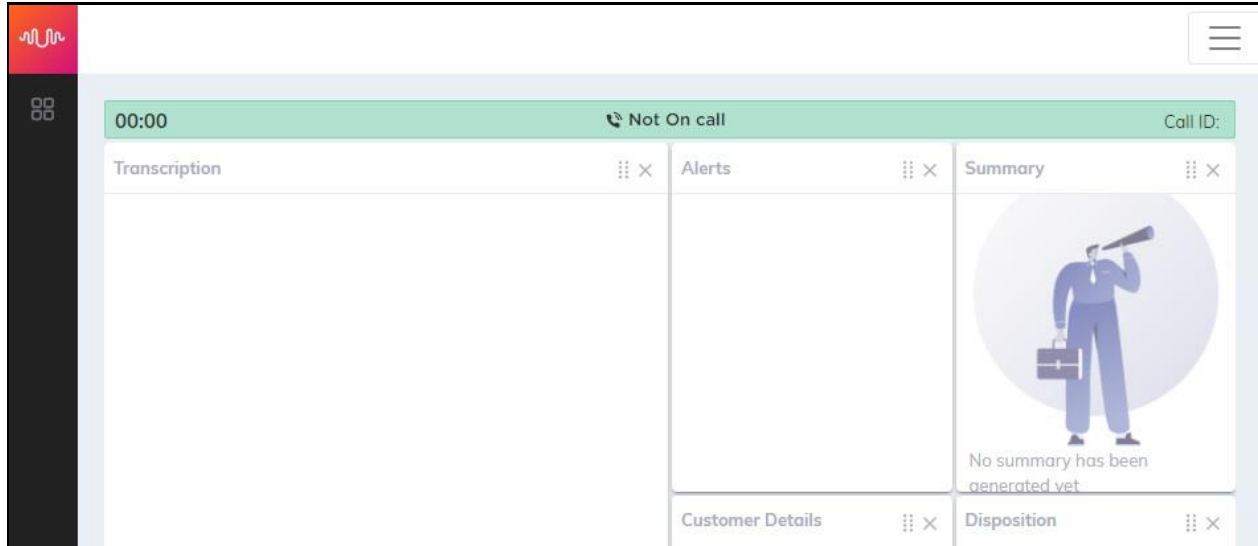
From an agent PC, launch an Internet browser window and enter the URL “http://ip-address/login” where “ip-address” is the IP address of the Real Intent server with the UI component. Log in using an agent user credential from **Section 9.2**.



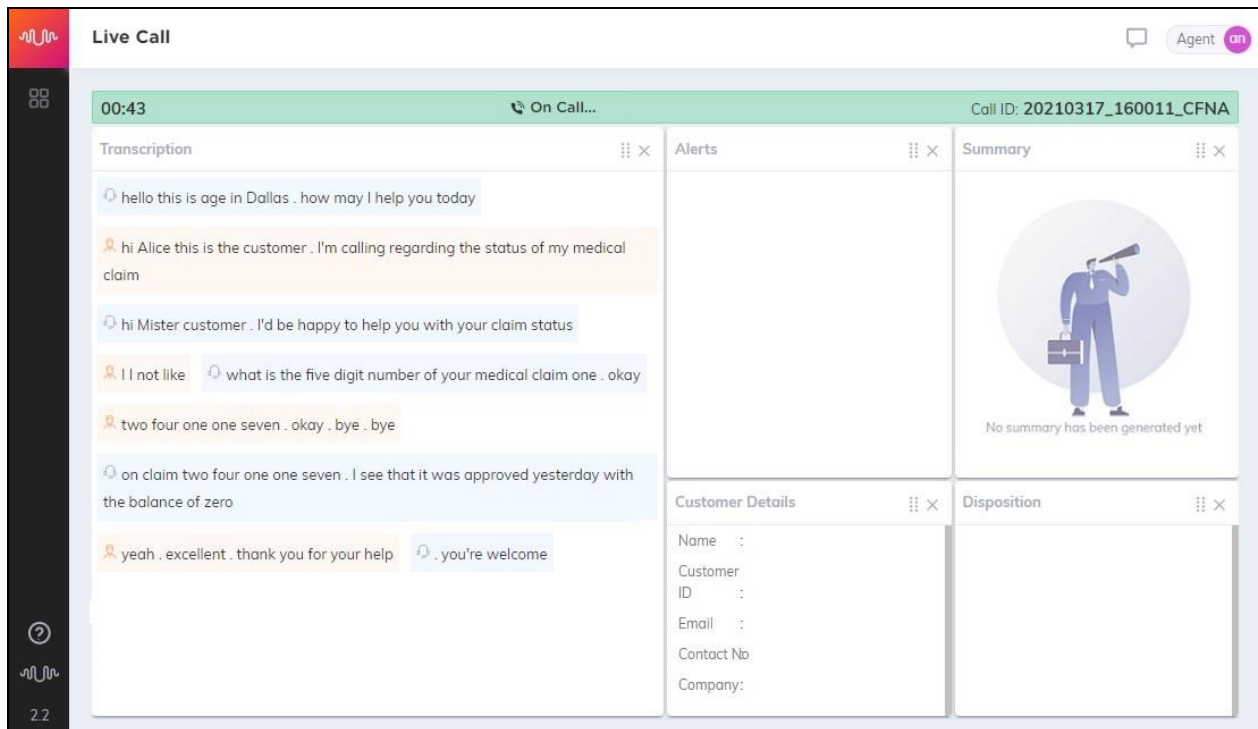
The screen below is displayed. Click on **Agent Desktop**.



The screen below is displayed next.



Establish an ACD call with this agent. Verify that the screen is updated to reflect **On Call**, and that conversation text appears in the **Transcription** area as shown below.



Complete the active ACD call. Verify that the screen is updated with a pop-up box containing **Auto Generated Summary** and **Auto Generated Disposition** for the agent to review, update, and submit, as shown below.

The screenshot shows a 'Live Call' interface with a pop-up box containing two sections: 'Auto Generated Summary' and 'Auto Generated Disposition'.

Auto Generated Summary

- Customer Name: NA
- Claim Id: NA
- Repeat Caller:
- Reason For Call: medical claim
- Was Claim Processed: Yes
- Was Customer Informed: Yes
- Was Explanation Given: No
- Reimbursement Status: Awaiting
- Time Period in which Customer will Receive Claim: NA

Auto Generated Disposition

Level - 1: Insurance

Level - 2: Benefit Verifica...

Level - 3: Medical

Level - 4: Claim

Level - 5:

Submit

11. Conclusion

These Application Notes describe the configuration steps required for Uniphore Real Intent 2.2 to successfully interoperate with Avaya Aura® Application Enablement Services 8.1.3 and Avaya Session Border Controller for Enterprise 8.1.3. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

12. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Release 8.1.x, Issue 7, October 2020, available at <http://support.avaya.com>.
2. *Administering Avaya Aura® Session Manager*, Release 8.1.x, Issue 7, November 2020, available at <http://support.avaya.com>.
3. *Administering Avaya Session Border Controller for Enterprise*, Release 8.1.x, Issue 3, August 2020, available at <http://support.avaya.com>.
4. *Uniphore Audio Logger Installation & Configuration Guide*, available at <https://www.community.uniphore.com>.

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