



## **Avaya Solution & Interoperability Test Lab**

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# **Application Notes for TASKE Call Recording Version 2021 with Avaya Aura® Communication Manager Release 10.1 and Avaya Aura® Application Enablement Services Release 10.1 – Issue 1.0**

## **Abstract**

These Application Notes describe the configuration steps required for TASKE Call Recording to interoperate with Avaya Aura® Communication Manager using Avaya Aura® Application Enablement Services.

In the compliance testing, TASKE Call Recording used the Device, Monitor and Call Control and Telephony Services Application Programming Interfaces from Avaya Aura® Application Enablement Services to monitor devices and record calls from the monitored devices on Avaya Aura® Communication Manager.

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 TASKE Call Recording to interoperate with Avaya Aura® Communication Manager using Avaya Aura® Application Enablement Services Device, Monitor and Call Control (DMCC) interface.

In the compliance testing, TASKE Call Recording used the Telephony Services Application Programming Interface (TSAPI) from Avaya Aura® Application Enablement Services to monitor station, agent and VDN devices on Avaya Aura® Communication Manager and used Device, Media and Call Control (DMCC) interface to perform Single Step Conference (SSC) with incoming and outgoing calls that comes from/to the monitored stations for call recording.

## 2. General Test Approach and Test Results

The feature test cases were performed manually. Upon startup of the TASKE Call Recording application, the application automatically queried for device status and record call for incoming and outgoing call to/from monitored stations.

For the manual part of the testing, incoming and outgoing calls were made involving monitored devices to enable event reports to be sent to TASKE Call Recording. Manual call controls from the customer and agent telephones were exercised to verify remaining event reports and reported device status by TASKE Call Recording.

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cable to the TASKE Call Recording 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 TASKE Call Recording did not include use of any specific encryption features.

## 2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on TASKE Call Recording:

- Handling of TSAPI messages in the areas of event notification and value queries.
- Recording various call types such internal, inbound, outbound, transfer, hold, and conference.
- Displaying detail of call recording information and playing it back.

The serviceability testing focused on verifying the ability of TASKE Call Recording to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet cable to the TASKE Call Recording server.

## 2.2. Test Results

All test cases were executed and passed.

## 2.3. Support

Technical support on TASKE Call Recording can be obtained through the following:

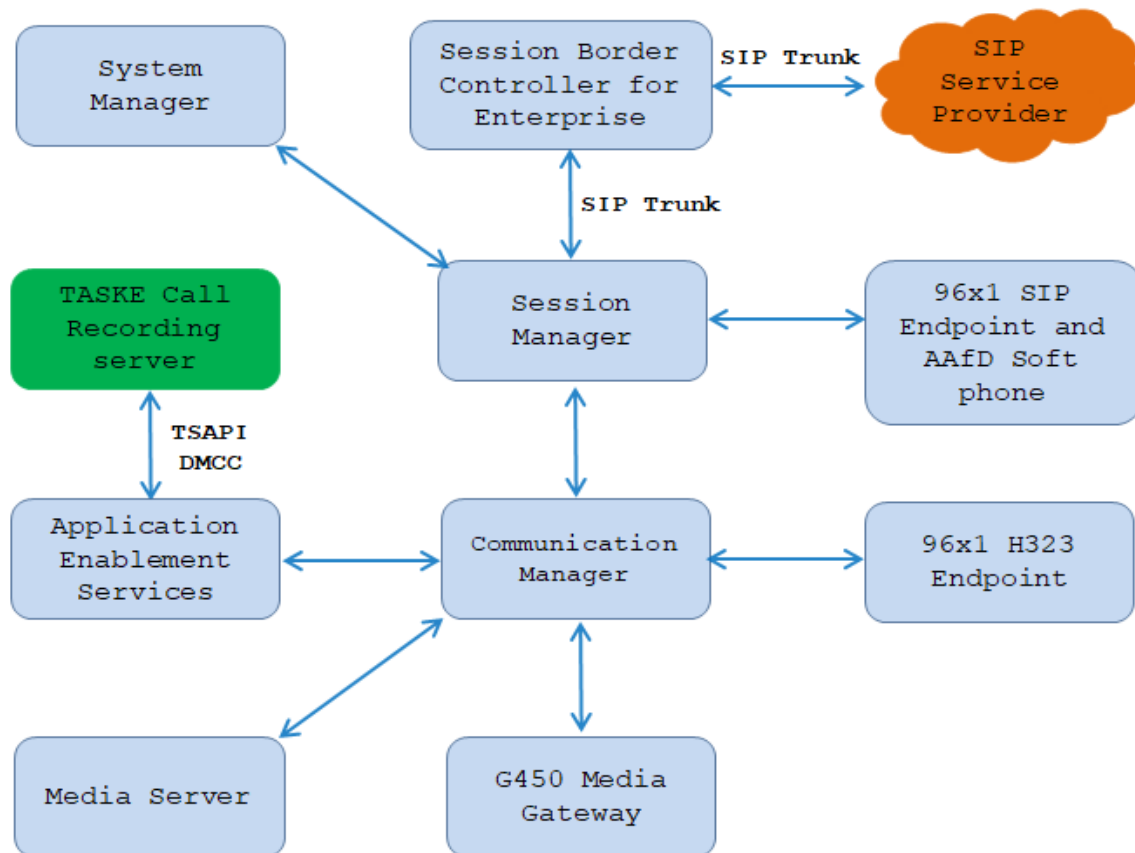
- **Phone:** +1 (877) 778-2753
- **Web:** <https://www.taske.com/support/>

### 3. Reference Configuration

The detailed administration of basic connectivity between Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services, and of contact center devices are not the focus of these Application Notes and will not be described.

In the compliance testing, the contact center devices consisted of one VDN, one skill group, one supervisor, and two agents shown in the table below. TASKE Call Recording requested monitoring on the VDN, skill group, and agent telephone extensions.

Device Type	Extension
VDN	3340
Skill Group	3320
Supervisor Telephone	3303
Agent IDs	1000, 1001, 1002
Monitored stations	3301, 3302, 3401, 3402



**Figure 1: Avaya Network with TASKE Call Recording Server**

## 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 running on virtualized environment	10.1 10.1.0.1.0.974.27372
Avaya Aura® Application Enablement Services running on virtualized environment	10.1 10.1.0.0.0.11
Avaya Aura® Session Manager running on virtualized environment	10.1 10.1.0.0.1010019
Avaya Aura® System Manager running on virtualized environment	10.1 10.1.0.0.0614119
Avaya Aura® Media Server running on virtualized environment	8.0 8.0.2.163
Avaya Session Border Controller for Enterprise	8.1.3
Avaya G450 Media Gateway	42.07.0
Avaya IP Deskphones <ul style="list-style-type: none"><li>• 9608 (H.323)</li><li>• 9621 (H.323)</li><li>• 9641GS (SIP)</li><li>• J189 (SIP)</li></ul>	6.8.304 6.8.304 7.1.9.0.8 4.0.7.1.5
Desktop PC running Avaya Agent for Desktop (H.323 and SIP)	2.0.6.0.10
TASKE Call Recording running on Windows 2016 Server	2021.1.1232

## 5. Configure Avaya Aura® Communication Manager

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

- Verify Communication Manager License
- Administer CTI link
- Administer AE Services
- Administer Virtual Station

### 5.1. Verify Communication Manager License

Log in to the System Access Terminal (SAT) to verify that the Communication Manager license has appropriate 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)?	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	<b>Computer Telephony Adjunct Links?</b>	<b>y</b>	
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	Digital Loss Plan Modification?	y	
Async. Transfer Mode (ATM) Trunking?	n	DS1 MSP?	y	
ATM WAN Spare Processor?	n	DS1 Echo Cancellation?	y	
ATMS?	y			
Attendant Vectoring?	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				
<b>Extension: 3222</b>				
<b>Type: ADJ-IP</b>				
COR: 1				
<b>Name: AES10</b>				

### 5.3. Administer AE Services

To administer the transport link to AES, use the command “**chang ip-services**”. On **Page 1**, add an entry with the following values. Service Type should be selected as **AESVCS**, enter “**y**” in the **Enabled**, “**procr**” in the **Local Node** and **8765** in the **Local Port**.

change ip-services					Page	1 of	4
IP SERVICES							
Service	Enabled	Local	Local	Remote	Remote		
Type		Node	Port	Node	Port		
AESVCS	y	procr	8765				

Go to **Page 4**, enter the following values. **AE Services Server** should be the AES IP node name, enter a password in the Password field and select “**y**” in the **Enabled** field.

**Note:** The password entered for **Password** field must match the password on the AES server in the Switch Connection in **Section 6.3**. The **AE Services Server** should match with the host name of the AES server. To obtain the host name of AES server, use the command “**uname -n**” in the Linux command prompt.

change ip-services				Page	4 of	4
AE Services Administration						
Server ID	AE Services Server	Password	Enabled	Status		
1:	<b>aes10</b>	<b>*</b>	<b>y</b>	in use		

## 5.4. Administer Virtual Station

Add a DMCC station using the “add station n” command, where “n” is an available extension number. Enter the following values for the specified fields, and retain the default values for the remaining fields.

- **Extension:** The available extension number.
- **Type:** Any IP telephone type, such as “9640”.
- **Name:** A descriptive name.
- **Security Code:** A desired code.
- **IP SoftPhone:** “y”.

add station 3317		Page	1 of	5
STATION				
<b>Extension:</b> 3317	Lock Messages? n	BCC:	0	
<b>Type:</b> 9640	<b>Security Code:</b> *	TN:	1	
Port: S000019	Coverage Path 1:	COR:	1	
<b>Name:</b> DMCC Station 1	Coverage Path 2:	COS:	1	
Unicode Name? n	Hunt-to Station:	Tests?	y	
STATION OPTIONS				
Time of Day Lock Table:				
Loss Group: 19	Personalized Ringing Pattern: 1			
Message Lamp Ext: 3317				
Speakerphone: 2-way	Mute Button Enabled? y			
Display Language: english	Button Modules: 0			
Survivable GK Node Name:				
Survivable COR: internal	Media Complex Ext:			
Survivable Trunk Dest? y	<b>IP SoftPhone? y</b>			
IP Video Softphone? n				
Short/Prefixed Registration Allowed: default				
Customizable Labels? y				



## 6. Configure Avaya Aura® Application Enablement Services

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

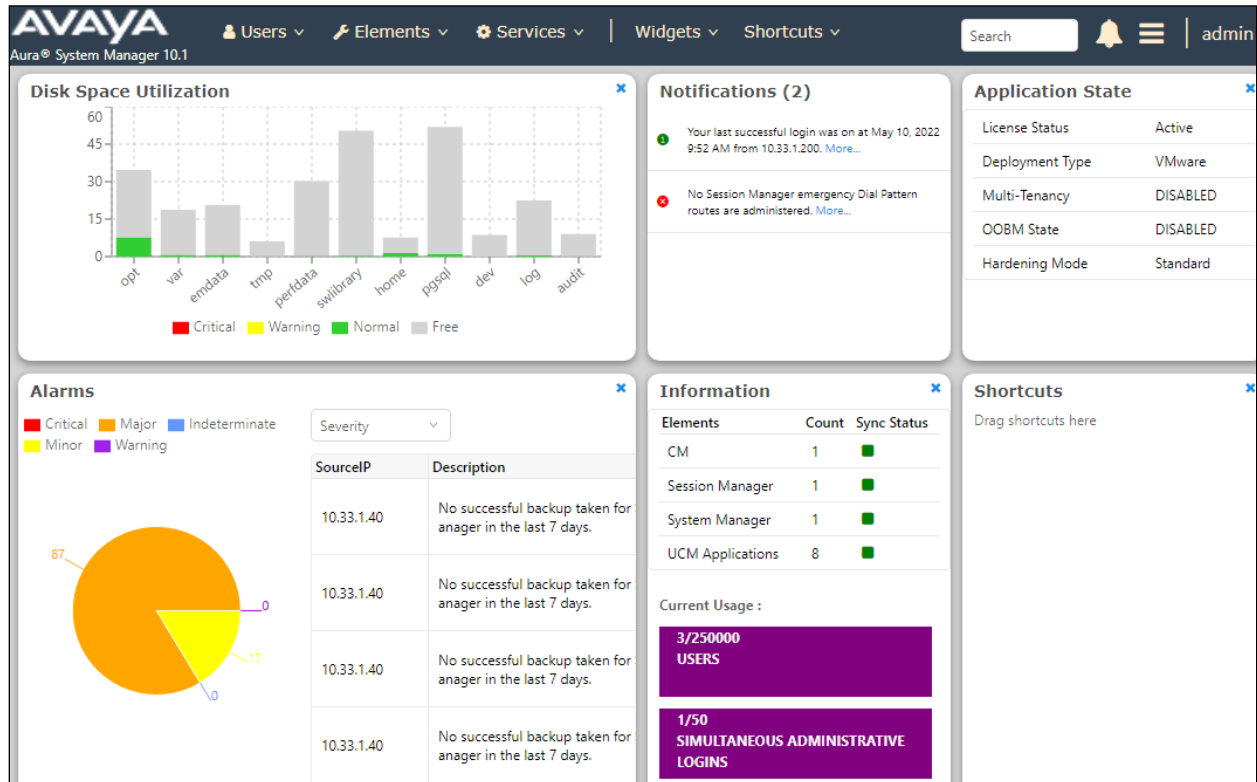
- Verify TSAPI license
- Launch OAM interface
- Administer TSAPI link
- Enable security database
- Restart TSAPI service
- Administer security database
- Obtain Tlink name
- Administer TSAPI and DMCC Port
- Administer TASKE user

### 6.1. Verify TSAPI License

Access the Web License Manager interface by using the URL “https://ip-address/WebLM/index.jsp” in an Internet browser window, where “ip-address” is the IP address of the server hosting the Web License Manager. During compliance testing, the Web License Manager was part of Avaya Aura® System Manager (System Manager).

The Login screen of System Manager is displayed. Log in using the appropriate credentials.

From the System Manager dashboard, select the service **Licenses** under the **Services** column.



The **Licenses** screen below is displayed next. 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** and **Device Media and Call Control**, as shown below.

WebLM Home	<b>Application Enablement (CTI) - Release: 10 - SID: 10503000</b>																							
Install license	You are here: Licensed Products > Application_Enablement > View License Capacity																							
Licensed products	License installed on: March 5, 2022 5:28:55 AM -06:00																							
APPL_ENAB	<b>License File Host IDs:</b> <span style="background-color: red; color: black;">[REDACTED]</span>																							
▼ Application_Enablement	<b>Licensed Features</b>																							
View license capacity	13 Items  Show <span>All ▼</span>																							
View peak usage	<table border="1"> <thead> <tr> <th>Feature (License Keyword)</th> <th>Expiration date</th> <th>Licensed capacity</th> </tr> </thead> <tbody> <tr> <td>Device Media and Call Control VALUE_AES_DMCC_DMC</td> <td>permanent</td> <td>100</td> </tr> <tr> <td>AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED</td> <td>permanent</td> <td>100</td> </tr> <tr> <td>AES HA LARGE VALUE_AES_HA_LARGE</td> <td>permanent</td> <td>10</td> </tr> <tr> <td>AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED</td> <td>permanent</td> <td>100</td> </tr> <tr> <td>Unified CC API Desktop Edition VALUE_AES_AEC_UNIFIED_CC_DESKTOP</td> <td>permanent</td> <td>100</td> </tr> <tr> <td>CVLAN ASAI VALUE_AES_CVLAN_ASAI</td> <td>permanent</td> <td>100</td> </tr> </tbody> </table>			Feature (License Keyword)	Expiration date	Licensed capacity	Device Media and Call Control VALUE_AES_DMCC_DMC	permanent	100	AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED	permanent	100	AES HA LARGE VALUE_AES_HA_LARGE	permanent	10	AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED	permanent	100	Unified CC API Desktop Edition VALUE_AES_AEC_UNIFIED_CC_DESKTOP	permanent	100	CVLAN ASAI VALUE_AES_CVLAN_ASAI	permanent	100
Feature (License Keyword)	Expiration date	Licensed capacity																						
Device Media and Call Control VALUE_AES_DMCC_DMC	permanent	100																						
AES ADVANCED LARGE SWITCH VALUE_AES_AEC_LARGE_ADVANCED	permanent	100																						
AES HA LARGE VALUE_AES_HA_LARGE	permanent	10																						
AES ADVANCED MEDIUM SWITCH VALUE_AES_AEC_MEDIUM_ADVANCED	permanent	100																						
Unified CC API Desktop Edition VALUE_AES_AEC_UNIFIED_CC_DESKTOP	permanent	100																						
CVLAN ASAI VALUE_AES_CVLAN_ASAI	permanent	100																						
ASBCE																								
▶Session_Border_Controller_E_AE																								
COMMUNICATION_MANAGER																								
▶Call_Center																								
▶Communication_Manager																								
SYSTEM_MANAGER																								
▶System_Manager																								
SessionManager																								
▶SessionManager																								
VSS																								
▶Interactive_Response																								
▶Voice_Portal																								

## 6.2. Launch OAM Interface

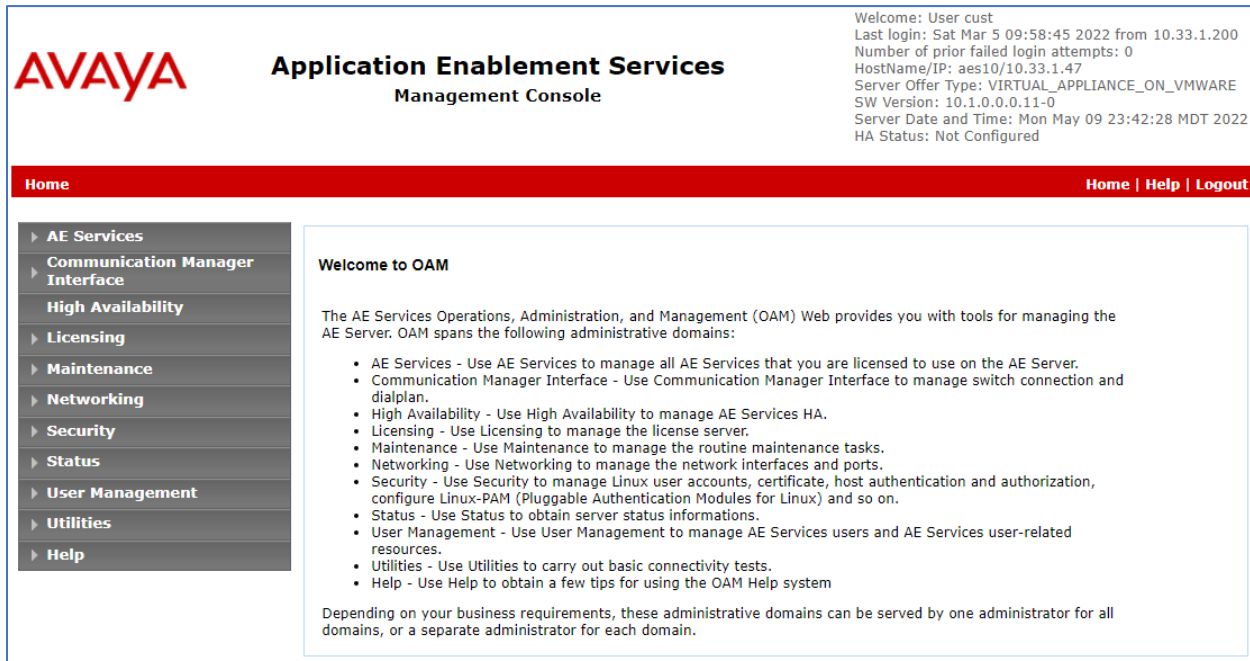
Access the OAM web-based interface by using the URL “https://ip-address” in an Internet browser window, where “ip-address” is the IP address of the Application Enablement Services server.

The **Please login here** screen is displayed. Log in using the appropriate credentials.



The screenshot shows the Avaya Application Enablement Services Management Console login interface. At the top left is the Avaya logo. To its right is the title "Application Enablement Services Management Console". A red horizontal bar spans the width of the page, with a "Help" link on the right. In the center, there is a login box with 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, a copyright notice reads: "Copyright © 2009-2021 Avaya Inc. All Rights Reserved."

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



The screenshot shows the Avaya Application Enablement Services Management Console "Welcome to OAM" screen. The layout includes the Avaya logo and title at the top left. On the top right, system information is displayed: "Welcome: User cust", "Last login: Sat Mar 5 09:58:45 2022 from 10.33.1.200", "Number of prior failed login attempts: 0", "HostName/IP: aes10/10.33.1.47", "Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_VMWARE", "SW Version: 10.1.0.0.11-0", "Server Date and Time: Mon May 09 23:42:28 MDT 2022", and "HA Status: Not Configured". A red navigation bar contains "Home", "Help", and "Logout" links. On the left, a sidebar menu lists various services: "AE Services", "Communication Manager Interface", "High Availability", "Licensing", "Maintenance", "Networking", "Security", "Status", "User Management", "Utilities", and "Help". The main content area is titled "Welcome to OAM" and contains a paragraph explaining the OAM web's purpose, followed by a bulleted list of services and their functions. At the bottom, a note states: "Depending on your business requirements, these administrative domains can be served by one administrator for all domains, or a separate administrator for each domain."

### 6.3. Administer Switch Connection

Select **Communication Manager Interface** → **Switch Connection** from the left pane of the **Management Console**, enter a name in **Switch Connection** box and click **Add** button (not shown). Enter the password as configured in **Section 5.3** in the **Switch Password** and **Confirm Switch Password** and check on **Processor Ethernet** field if the Processor Ethernet is used in Communication Manager. Click **Apply** button to save the configuration.

The screenshot shows the 'Communication Manager Interface | Switch Connections' page. On the left is a navigation pane with 'Communication Manager Interface' expanded, showing 'Switch Connections' as the active tab. The main area displays 'Connection Details - cm10' with the following fields:

- Switch Password: [password field]
- Confirm Switch Password: [password field]
- Msg Period: 30 Minutes (1 - 72)
- Provide AE Services certificate to switch: ☐
- Secure H323 Connection: ☐
- Processor Ethernet: ☒
- Enable TLS Certificate Hostname Validation: ☐

At the bottom of the form are 'Apply' and 'Cancel' buttons.

Select the **cm10** switch connection has been added above and selects **Edit PE/CLAN IPs** to add IP address of switch connection.

The screenshot shows the 'Communication Manager Interface | Switch Connections' page. On the left is a navigation pane with 'Communication Manager Interface' expanded, showing 'Switch Connections' as the active tab. The main area displays 'Switch Connections' with a table and buttons.

Buttons: [Add Connection]

Connection Name	Processor Ethernet	Msg Period	Number of Active Connections
<input checked="" type="radio"/> cm10	Yes	30	1

Buttons: [Edit Connection] [Edit PE/CLAN IPs] [Edit Signaling Details] [Delete Connection] [Survivability Hierarchy]

Enter IP address of Processor Ethernet of Communication Manager in the box and click **Add/Edit Name of IP** button to add the IP.

Communication Manager Interface | Switch Connections Home | Help | Logout

AE Services  
Communication Manager Interface  
Switch Connections  
Dial Plan  
High Availability  
Licensing  
Maintenance  
Networking  
Security  
Status  
User Management  
Utilities  
Help

**Edit Processor Ethernet IP - cm10**

10.33.1.43

Name or IP Address	Status
10.33.1.43	In Use

## 6.4. Administer TSAPI Link

To administer a TSAPI link, select **AE Services → TSAPI → TSAPI Links** from the left pane. The **TSAPI Links** screen is displayed, as shown below. Click **Add Link**.

**AVAYA** Application Enablement Services Management Console

Welcome: User cust  
Last login: Sat Mar 5 09:58:45 2022 from 10.33.1.200  
Number of prior failed login attempts: 0  
HostName/IP: aes10/10.33.1.47  
Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_VMWARE  
SW Version: 10.1.0.0.0.11-0  
Server Date and Time: Mon May 09 23:57:56 MDT 2022  
HA Status: Not Configured

AE Services | TSAPI | TSAPI Links Home | Help | Logout

AE Services  
CVLAN  
DLG  
DMCC  
SMS  
TSAPI  
TSAPI Links  
TSAPI Properties  
TWS  
Communication Manager Interface  
High Availability

**TSAPI Links**

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 switch connection as configured in **Section 6.3** from the drop-down list. In this case, the existing switch connection “cm10” is selected. For **Switch CTI Link Number**, select the CTI link number from **Section 5.2**. Retain the default values in the remaining fields.

**AVAYA Application Enablement Services Management Console**

Welcome: User cust  
 Last login: Sat Mar 5 09:58:45 2022 from 10.33.1.200  
 Number of prior failed login attempts: 0  
 HostName/IP: aes10/10.33.1.47  
 Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_VMWARE  
 SW Version: 10.1.0.0.11-0  
 Server Date and Time: Mon May 09 23:54:19 MDT 2022  
 HA Status: Not Configured

**AE Services | TSAPI | TSAPI Links** Home | Help | Logout

**▼ AE Services**

- ▶ CVLAN
- ▶ DLG
- ▶ DMCC
- ▶ SMS
- ▼ **TSAPI**
  - **TSAPI Links**
  - TSAPI Properties
- ▶ TWS
- ▶ **Communication Manager Interface**
- ▶ **High Availability**

**Add TSAPI Links**

Link: 1 ▼  
 Switch Connection: cm10 ▼  
 Switch CTI Link Number: 1 ▼  
 ASAI Link Version: 12 ▼  
 Security: Unencrypted ▼

Apply Changes Cancel Changes

## 6.5. Restart TSAPI Service

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

**AVAYA Application Enablement Services Management Console**

Welcome: User cust  
 Last login: Sat Mar 5 09:58:45 2022 from 10.33.1.200  
 Number of prior failed login attempts: 0  
 HostName/IP: aes10/10.33.1.47  
 Server Offer Type: VIRTUAL\_APPLIANCE\_ON\_VMWARE  
 SW Version: 10.1.0.0.11-0  
 Server Date and Time: Tue May 10 10:12:01 MDT 2022  
 HA Status: Not Configured

**Maintenance | Service Controller** Home | Help | Logout

**▶ AE Services**

- ▶ **Communication Manager Interface**
- ▶ **High Availability**
- ▶ **Licensing**
- ▼ **Maintenance**
  - Date Time/NTP Server
  - ▶ Security Database
  - ▶ **Service Controller**
  - ▶ Server Data
- ▶ **Networking**
- ▶ **Security**

**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

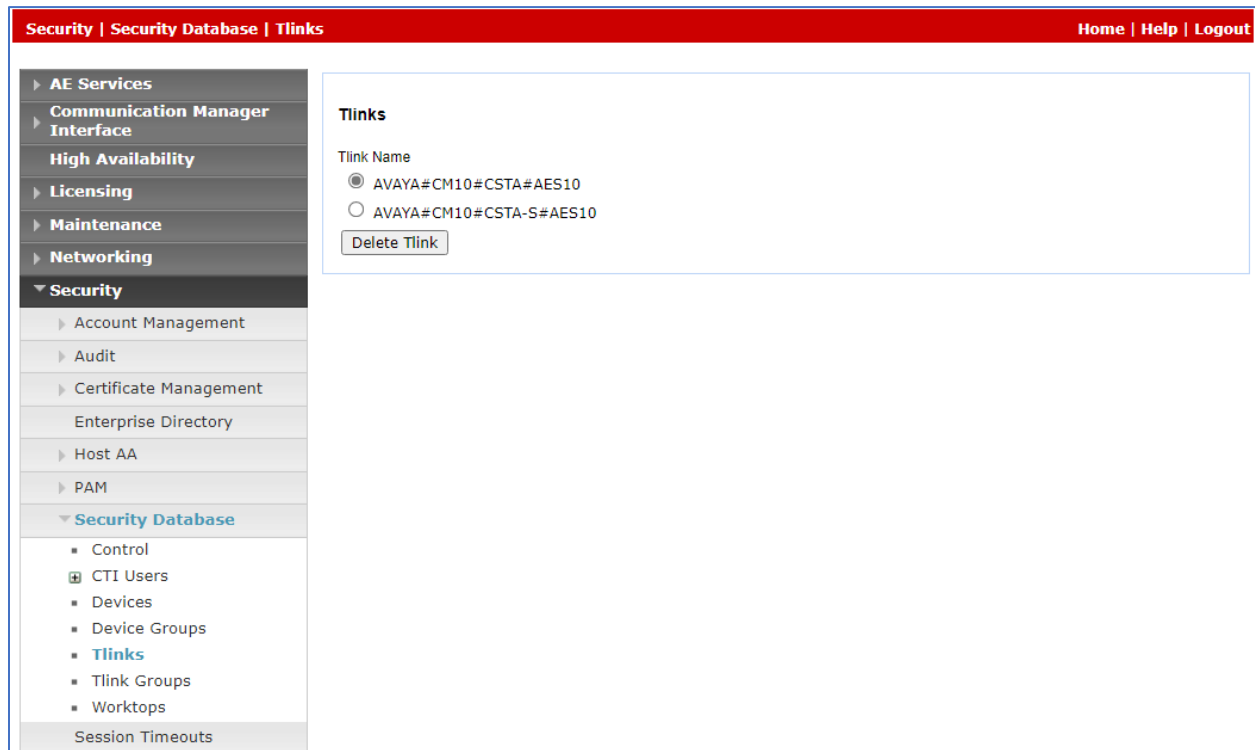
For status on actual services, please use [Status and Control](#)

Start Stop Restart Service Restart AE Server Restart Linux Restart Web Server

## 6.6. 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 TASKE.

In this case, the associated Tlink name is “**AVAYA#CM10#CSTA#AES10**”. Note the use of the switch connection “cm10” from **Section 6.4** as part of the Tlink name.





## 6.7. Administer TSAPI and DMCC Port

Select **Networking** → **Ports** from the left pane, to display the **Ports** screen in the right pane. In the **TSAPI Ports** section, select the radio button for **TSAPI Service Port 450** under the Enabled column and **Unencrypted Port 4721** in the DMCC Server Ports section as shown in the screenshot below. Retain the default values in the remaining fields.

Networking | Ports

Home | Help | Logout

▶ AE Services

▶ Communication Manager Interface

▶ High Availability

▶ Licensing

▶ Maintenance

▼ Networking

AE Service IP (Local IP)

Network Configure

Ports

TCP/TLS Settings

▶ Security

▶ Status

▶ User Management

▶ Utilities

▶ Help

Ports

CVLAN Ports

Unencrypted TCP Port9999

Encrypted TCP Port9998

DLG Port

TCP Port5678

TSAPI Ports

TSAPI Service Port450

Local TLINK Ports

TCP Port Min1024

TCP Port Max1039

Unencrypted TLINK Ports

TCP Port Min1050

TCP Port Max1065

Encrypted TLINK Ports

TCP Port Min1066

TCP Port Max1081

DMCC Server Ports

Unencrypted Port4721

Encrypted Port4722

TR/87 Port4723

## 6.8. Administer TASKE 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 values in the remaining fields.

User Management | User Admin | List All Users

Home | 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

Edit User

\* User Id

taske

\* Common Name

Taske

\* Surname

Call Recording

User Password

\*\*\*\*\*

Confirm Password

\*\*\*\*\*

Admin Note

Avaya Role

None ▼

Business Category

Car License

CM Home

Css Home

CT User

Yes ▼

Department Number

Display Name

Employee Number

Employee Type

Enterprise Handle

Given Name

Home Phone

Home Postal Address

Initials

Labeled URI

Select **Security** → **Security Database** → **CTI Users** → **List All Users** from the left pane, and select the newly created TASKE user from the listing (not shown).

The **Edit CTI User** screen is displayed next. Set the permissions as shown below.

**Security | Security Database | CTI Users | List All Users** 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  
        **CTI Users**  
            **List All Users**  
            Search Users  
        Devices  
        Device Groups  
        Tlinks

**Edit CTI User**

User Profile:

User ID	taske
Common Name	TASKE
Worktop Name	NONE ▼
Unrestricted Access	<input checked="" type="checkbox"/>

---

Call and Device Control:

Call Origination/Termination and Device Status	None ▼
--	--------

---

Call and Device Monitoring:

Device Monitoring	None ▼
Calls On A Device Monitoring	None ▼
Call Monitoring	<input type="checkbox"/>

---

Routing Control:

Allow Routing on Listed Devices	None ▼
---------------------------------	--------

## 7. Configure TASKE Call Recording

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

- Administer TASKE Database Update Wizard
- Administer TASKE Collector
- Administer Extensions
- Administer Agents
- Administer Agent Groups
- Administer Queues
- Administer VDN
- Restart components

### 7.1. Administer TASKE Database Update Wizard

At the conclusion of the TASKE Call Recording installation, the TASKE Database Update Wizard is invoked automatically and displays the **Welcome to the TASKE Database Update Wizard** screen shown below.

TASKE Database Update Wizard

### Welcome to the TASKE Database Update Wizard

This application allows for manual and automated synchronization of the TASKE Administrator with resources from your telephone system.

**Configure**  
The configuration part of the wizard must be run at least once to initially configure synchronization options. An automated synchronization schedule may also be set up.  
**The wizard has not been configured yet.**

**Synchronize**  
From here you can manually synchronize the resources. It is a good idea to test that the configuration produces your expected results.

Synchronize these resource types

☒ Queues & agents ☒ Extensions ☒ Trunk groups

TASKE License Count  
Agents: 5/10  
Extensions: 6/50000

TSAPI License Count  
Count: 0

Navigate forward to the **PBX File Exports** screen. If Avaya Site Administration is used to obtain the configured contact center devices from Communication Manager, then the path to where the data files reside can be entered in **Folder**.

In the compliance testing, the manual method was used to configure the contact center devices on TASKE, therefore all default values were retained on the TASKE Database Update Wizard.

The screenshot shows the 'TASKE Database Update Wizard' window. The title bar says 'TASKE Database Update Wizard' with a close button. The main area is titled 'Configuration' and contains the instruction: 'TASKE can collect information about your telephone system using one of the following methods. Please select how you'd like this information collected:'. There are two options: 'PBX File Exports' with a folder and arrow icon, and 'System Management Service' with a database cylinder icon. The 'PBX File Exports' option is selected and has the description 'Create TASKE device database using exports from the Avaya Site Administration utility.' The 'System Management Service' option has the description 'Utilize the System Management Service to query the system directly to populate the TASKE device database Requires AES version 5.2 or later.' At the bottom, there is a status bar with license counts: 'TASKE License Count' (Agents: 5/10, Extensions: 6/50000) and 'TSAPI License Count' (Count: 0). To the right of these counts are buttons for 'Recalculate License', '< Back', 'Next', 'Cancel', and 'Help'.

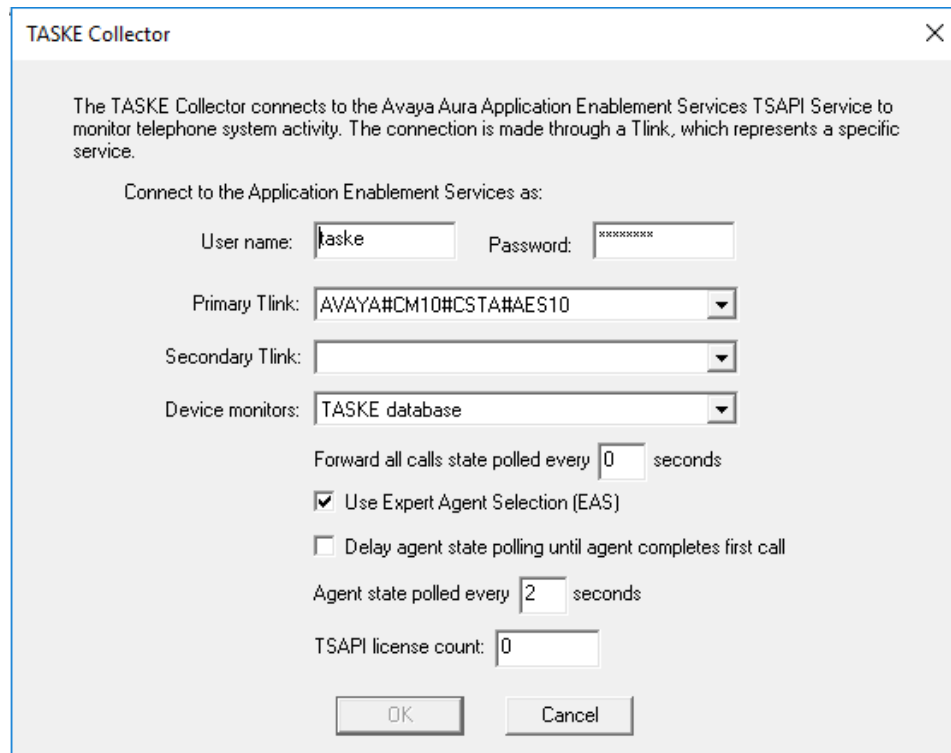
TASKE License Count		TSAPI License Count	
Agents:	5/10	Count:	0
Extensions:	6/50000		

Buttons: Recalculate License, < Back, Next, Cancel, Help

## 7.2. Administer TASKE Collector

After completing the TASKE Database Update Wizard, the **TASKE Collector** screen is displayed. For **Primary Tlink**, select the Tlink name from **Section 6.6**.

For **User name** and **Password**, enter the TASKE user credentials from **Section 6.8**.



The TASKE Collector connects to the Avaya Aura Application Enablement Services TSAPI Service to monitor telephone system activity. The connection is made through a Tlink, which represents a specific service.

Connect to the Application Enablement Services as:

User name:  Password:

Primary Tlink:

Secondary Tlink:

Device monitors:

Forward all calls state polled every  seconds

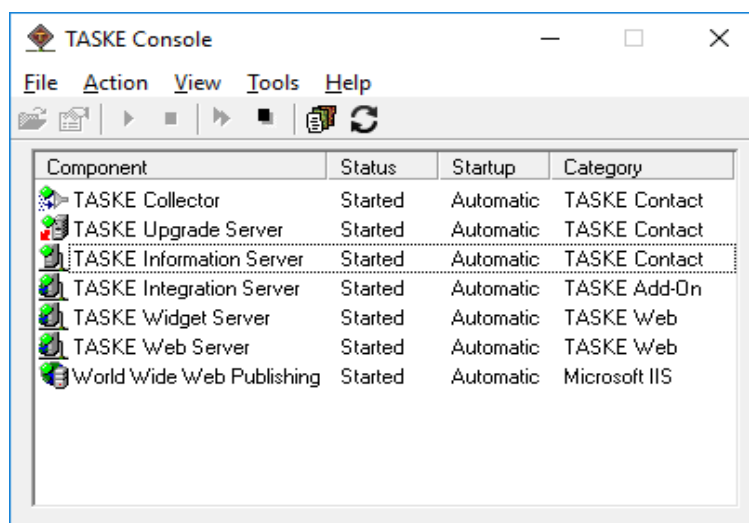
☒ Use Expert Agent Selection (EAS)

☐ Delay agent state polling until agent completes first call

Agent state polled every  seconds

TSAPI license count:

The **TASKE Console** screen is displayed next. Select **Tools → Administrator** from the top menu.



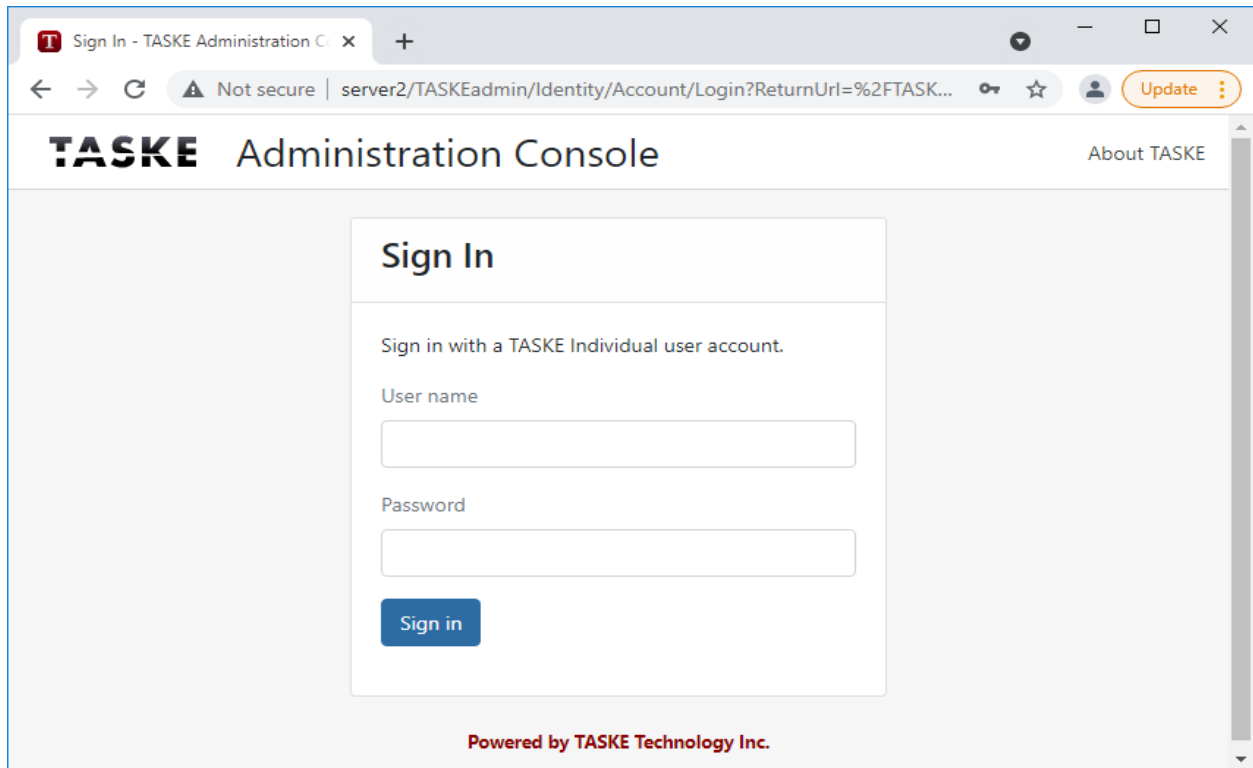
TASKE Console

File Action View Tools Help

Component	Status	Startup	Category
TASKE Collector	Started	Automatic	TASKE Contact
TASKE Upgrade Server	Started	Automatic	TASKE Contact
TASKE Information Server	Started	Automatic	TASKE Contact
TASKE Integration Server	Started	Automatic	TASKE Add-On
TASKE Widget Server	Started	Automatic	TASKE Web
TASKE Web Server	Started	Automatic	TASKE Web
World Wide Web Publishing	Started	Automatic	Microsoft IIS

### 7.3. TASKE Administration Console

In order to configure TASKE, log in to the **TASKE Administration Console** from the internet browser. Enter the appropriate credentials and select the **Sign in** button.



The screenshot shows a web browser window with the title "Sign In - TASKE Administration C...". The address bar shows a "Not secure" warning and the URL "server2/TASKEadmin/Identity/Account/Login?ReturnUrl=%2FTASK...". The page header features the "TASKE Administration Console" logo and an "About TASKE" link. The main content area is a "Sign In" form with the instruction "Sign in with a TASKE Individual user account." It includes input fields for "User name" and "Password", and a blue "Sign in" button. At the bottom, it states "Powered by TASKE Technology Inc."

## 7.4. Configure Call Recording

Enter the **Recording service address** and **Recording server RTP address**. You can select the **Minimum recording length** of calls to keep, select the **Default recording method**, **Recording file location**, and the **First RTP port** to use. Select the **Save** button to save the changes.

The screenshot displays the TASKE Administration Console interface. A modal dialog titled "Configure Call Recording" is open in the center. The background interface shows the "Call Recording" section with an "Overview" tab selected. The status indicates "Service running, no calls". Under "Recording Rules", there is a toggle for "Filtering is turned OFF".

**Configure Call Recording**

Changes to the call recording configuration will require the Call Recording service to be restarted.

Recording service address: 10.33.1.80

Recording service RTP address: 10.33.1.80

Minimum recording length: 5 seconds

Default recording method: Single-step conference

Service observe feature access code (FAC): \*63

Recording file location: C:\ProgramData\TASKE Technology Inc\Contact\recorded\_calls

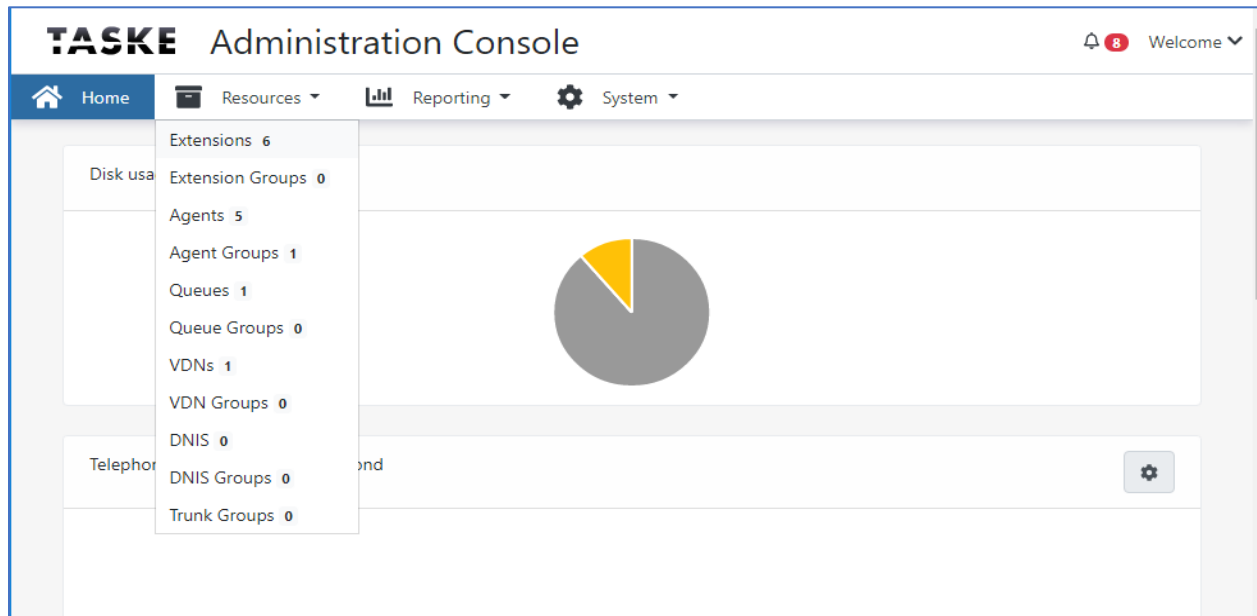
First RTP port: 35000

Buttons: Save, Cancel



## 7.5. Administer Extensions

In the **Administration Console**, navigate to **Resources** → **Extensions**. In the **Extension List** section, select the plus sign + button (not shown).



In the **New Extension** section, enter the station number, for example **3301**, in the **ID** box, enter a name in the **Name** box and enable the monitor by selecting the switch button **Monitor** status. If this station will be recorded, toggle the **Recording calls** button to **ON**. If the station is a DMCC device which will perform the recording, change the **Extension type** to Recording Device. Select the **Save** button (not shown) to save the change.

TASKE Administration Console

3

Welcome ▾

Home

Resources ▾

Reporting ▾

Recording

System ▾

Resources / Extension List

Last updated: 5/30/2022 10:58:03 AM

Extension: 3301 ext3301

General

ID

Name

Nickname

3301

ext3301

Monitored status

ON

☐

 Only on agent logon

Extension type

Normal ▾

Call Recording

Recording calls

Recording method

ON

[Use default method] ▾

TASKE Administration Console

3

Welcome ▾

Home

Resources ▾

Reporting ▾

Recording

System ▾

Resources / Extension List

Last updated: 5/30/2022 11:00:19 AM

Extension: 3317 dmcc3317

General

ID

Name

Nickname

3317

dmcc3317

Monitored status

ON

☐

Extension type

Password

Recording Device ▾

.....

Below is the list of extensions that were monitored during the testing.

**TASKE** Administration Console3 Welcome

Home Resources Reporting Recording System

ResourcesLast updated: 5/30/2022 10:44:22 AM

**Extension List**9 resources  
Monitoring 9 extensions always, 0 on agent logon

+

All types

Any monitor status

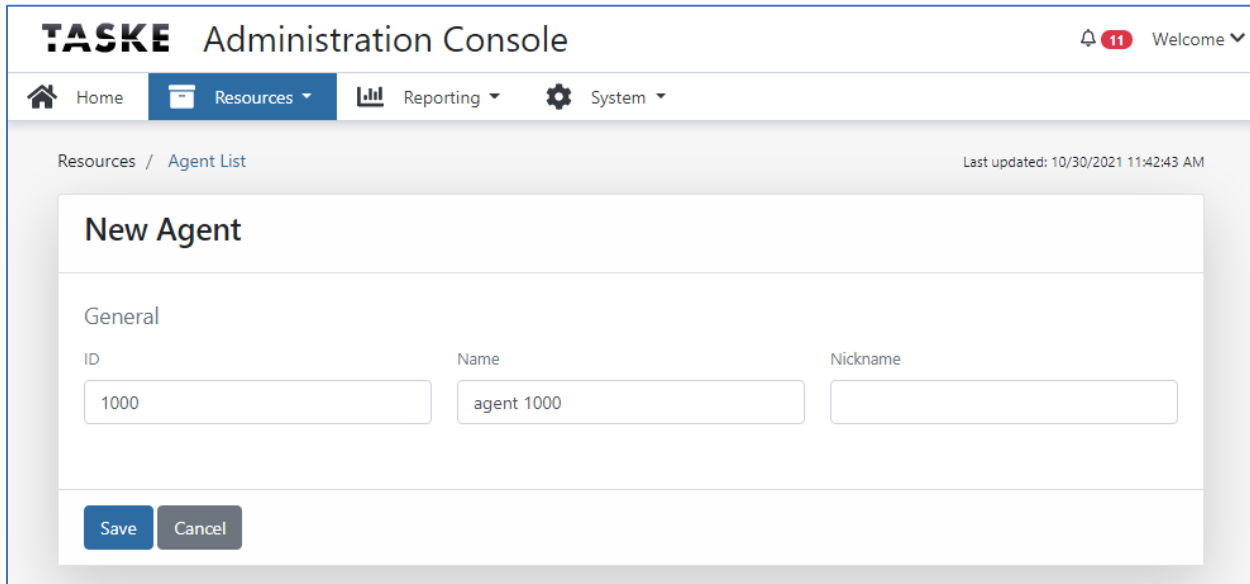
Any recording status

Q

ID	Name	Nickname	Type	Status	Recorded
3300	ext3300		Normal	Monitored	Recording calls
3301	ext3301		Normal	Monitored	Recording calls
3302	ext3302		Normal	Monitored	Recording calls
3317	dmcc3317		Recording Device	Monitored	
3318	dmcc3318		Recording Device	Monitored	
3319	dmcc3319		Recording Device	Monitored	
3401	ext3401		Normal	Monitored	Recording calls
3402	ext 3402		Normal	Monitored	Recording calls
3403	AAfD	Softphone	Normal	Monitored	Recording calls

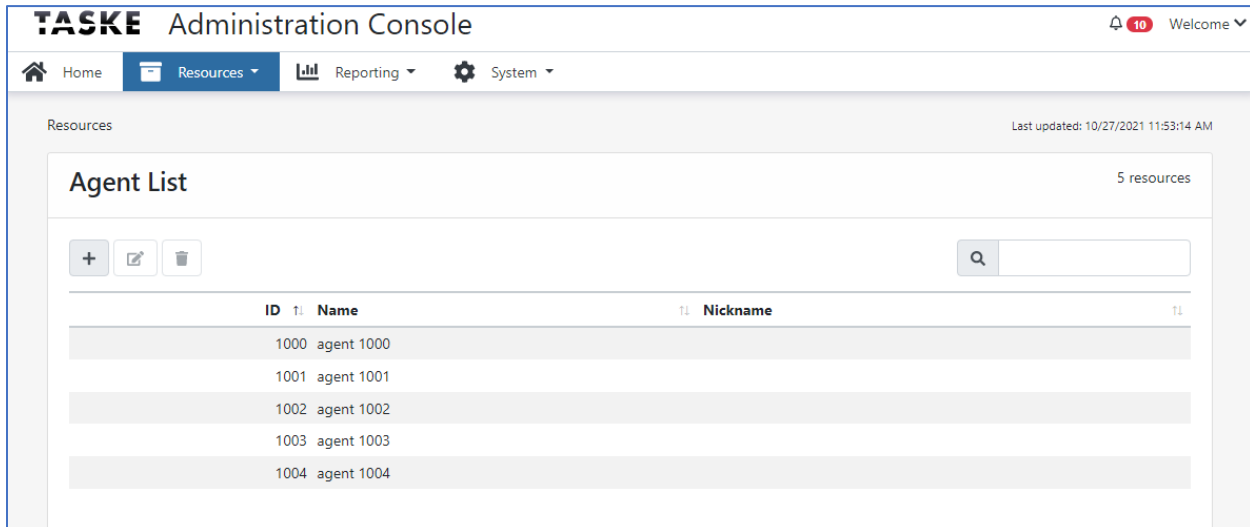
## 7.6. Administer Agents

Follow the same procedure in **Section 7.3** above to open the **Administration Console**. Navigate to **Resources** → **Agents**, the **Agent List** page displays and select the plus sign + button (not shown) to add an agent. Enter the agent ID in the **ID** box and a name in the **Name** box. Select the **Save** button to save the new agent. Note that Agent, skill/split, and VDN were previously configured in CM.



The screenshot shows the 'New Agent' form in the TASKE Administration Console. The form is titled 'New Agent' and is located under the 'Resources / Agent List' breadcrumb. It has a 'General' section with three input fields: 'ID' (containing '1000'), 'Name' (containing 'agent 1000'), and 'Nickname' (empty). Below the fields are 'Save' and 'Cancel' buttons. The top navigation bar includes 'Home', 'Resources', 'Reporting', and 'System' menus. The top right shows a notification bell with '11' and a 'Welcome' dropdown. The bottom right corner indicates 'Last updated: 10/30/2021 11:42:43 AM'.

Below is the list of agent IDs used during the testing.



The screenshot shows the 'Agent List' table in the TASKE Administration Console. The table is titled 'Agent List' and is located under the 'Resources' breadcrumb. It shows 5 resources. The table has columns for 'ID', 'Name', and 'Nickname'. The data rows are as follows:

ID	Name	Nickname
1000	agent 1000	
1001	agent 1001	
1002	agent 1002	
1003	agent 1003	
1004	agent 1004	

The top navigation bar includes 'Home', 'Resources', 'Reporting', and 'System' menus. The top right shows a notification bell with '10' and a 'Welcome' dropdown. The bottom right corner indicates 'Last updated: 10/27/2021 11:53:14 AM'.

## 7.7. Administer Agent Groups

Follow the same procedure in **Section 7.3** above to open the **Administration Console**. Navigate to **Resources → Group Agents**, the **Group Agent List** page displays and select the plus sign + button (not shown) to add a new group agent. Enter a group ID in the **ID** box and a name in the **Name** box. Select the **Save** button to save the new agent.

The screenshot shows the 'New Agent Group' form in the TASKE Administration Console. The form is titled 'New Agent Group' and is located under the 'Resources / Agent Group List' breadcrumb. The 'General' section contains three input fields: 'ID' (containing '3320'), 'Name' (containing 'agrp3320'), and 'Nickname' (empty). Below these fields is a checkbox labeled 'Automatically generate an ID' which is unchecked. At the bottom of the form are 'Save' and 'Cancel' buttons. The top navigation bar includes 'Home', 'Resources', 'Reporting', and 'System' menus. The top right corner shows a notification bell with '11' and a 'Welcome' dropdown. The bottom right corner indicates 'Last updated: 10/30/2021 11:49:13 AM'.

Below is the group agent used during the testing.

The screenshot shows the 'Agent Group List' table in the TASKE Administration Console. The table is titled 'Agent Group List' and is located under the 'Resources' breadcrumb. The table has four columns: 'ID', 'Name', 'Nickname', and 'Member Count'. There is one row of data with the following values: '3320', 'agrp3320', and '5'. The table is located under the 'Resources' breadcrumb. The top navigation bar includes 'Home', 'Resources', 'Reporting', and 'System' menus. The top right corner shows a notification bell with '10' and a 'Welcome' dropdown. The bottom right corner indicates 'Last updated: 10/27/2021 11:55:09 AM'.

ID	Name	Nickname	Member Count
3320	agrp3320		5

## 7.8. Administer Queues

Follow the same procedure in **Section 7.3** above to open the **Administration Console**. Navigate to **Resources** → **Queues**, the **Queues List** page displays and select the plus sign + button (not shown) to add a new queue. Enter a queue ID in the **ID** box, a name in the **Name** box, select the agent group **3320** configured in **Section 7.5** and select **ON** in the **Monitor status**. Select the **Save** button to save the new agent.

The screenshot shows the 'New Queue' form in the TASKE Administration Console. The form is divided into three sections: General, Monitored status, and Reporting. In the General section, the ID is 330, the Name is hg3320, and the Nickname is empty. In the Monitored status section, the status is ON (indicated by a green square) and the Agent Group is 3320 (selected from a dropdown menu). In the Reporting section, the TSF time is 30 seconds. The top navigation bar includes Home, Resources, Reporting, and System. The breadcrumb trail shows Resources / Queue List. The last updated timestamp is 10/30/2021 11:57:20 AM.

The new queue ID **3320** is added as shown below. This queue ID is matched with the skill number configured in Communication Manager.

The screenshot shows the 'Queue List' table in the TASKE Administration Console. The table has columns for ID, Name, Nickname, Status, and TSF Time. There is one row of data: ID 3320, Name hg3320, Status Monitored (indicated by a green dot), and TSF Time 30s. The top navigation bar includes Home, Resources, Reporting, and System. The breadcrumb trail shows Resources. The last updated timestamp is 10/30/2021 12:00:55 PM. The table also shows 1 resource and Monitoring 1 queue.

ID	Name	Nickname	Status	TSF Time
3320	hg3320		Monitored	30s

## 7.9. Administer VDN

Follow the same procedure in **Section 7.3** above to open the **Administration Console**. Navigate to **Resources** → **VDNs**, the **VDN List** page displays and select the plus sign + button (not shown) to add a new VDN. Enter a VDN ID in the **ID** box, a name in the **Name** box and select **ON** in the **Monitor status**. Select the **Save** button to save the new agent.

The screenshot shows the 'New VDN' form in the TASKE Administration Console. The form is titled 'New VDN' and is located under the 'Resources / VDN List' breadcrumb. The 'General' section contains four fields: 'ID' (text input with value '3340'), 'Name' (text input with value 'v3340'), 'Nickname' (empty text input), and 'Monitored status' (a green button labeled 'ON' next to an unchecked checkbox). Below these fields is a 'Vectors...' button and a checkbox labeled 'Has VDN return destination'. At the bottom of the form are 'Save' and 'Cancel' buttons. The top navigation bar includes 'Home', 'Resources', 'Reporting', and 'System' menus. The top right corner shows a notification bell with '11' and a 'Welcome' dropdown. The bottom right corner indicates 'Last updated: 10/30/2021 12:06:02 PM'.

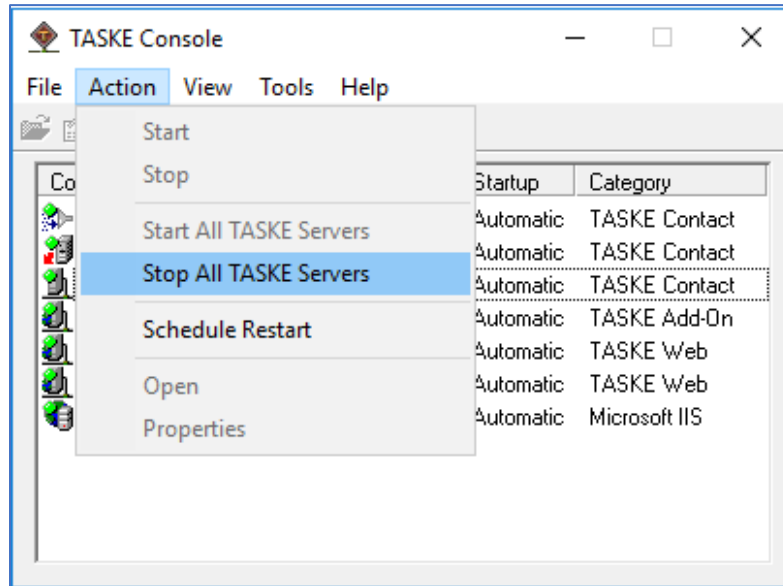
The new VDN **3340** is added as shown below.

The screenshot shows the 'VDN List' table in the TASKE Administration Console. The table is titled 'VDN List' and is located under the 'Resources' breadcrumb. The table has four columns: 'ID', 'Name', 'Nickname', and 'Status'. There is one row of data with the following values: '3340', 'v3340', and 'Monitored' (indicated by a green dot). The table is filtered by 'Any status' and has a search bar. The top navigation bar includes 'Home', 'Resources', 'Reporting', and 'System' menus. The top right corner shows a notification bell with '11' and a 'Welcome' dropdown. The bottom right corner indicates 'Last updated: 10/30/2021 12:08:36 PM'.

ID	Name	Nickname	Status
3340	v3340		Monitored

## 7.11. Restart Components

The **TASKE Console** screen is displayed next. Restart all components by selecting **Action → Stop All TASKE Servers** from the top menu, followed by **Action → Start All TASKE Servers**.





## 8. Verification Steps

This section provides the tests that can be performed to verify the proper configuration of Avaya Aura® Communication Manager, Avaya Aura® Application Enablement Services, and TASKE Call Recording.

### 8.1. Verify Avaya Aura® Communication Manager

On Communication Manager, verify the status of the administered CTI link by using the “status aesvcs cti-link” command. Verify that the **Service State** is “established” for the CTI link number administered in **Section 5.2**, as shown below.

```
status aesvcs cti-link
```

AE SERVICES CTI LINK STATUS						
CTI Link	Version	Mnt Busy	AE Services Server	Service State	Msgs Sent	Msgs Rcvd
1	12	no	aes10	established	15	15

### 8.2. Verify Avaya Aura® Application Enablement Services

On Application Enablement Services, verify the 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 the **Status** is “Talking” for the TSAPI link administered in **Section 6.4**, as shown below.

**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

▶ User Management

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	cm10	1	Talking	Mon May 2 10:41:43 2022	Online	20	12	15	15	30

Online Offline

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

TSAPI Service Status TLink Status User Status

Select **DMCC Service Summary** in the **Status and Control** section. The **Session Summary** page displays the session ID, CTI user, application name and IP address of TASKE server that is connecting to AES via DMCC.

Status | Status and Control | DMCC 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

User Management

Utilities

Help

DMCC Service Summary - Session Summary

Please do not use back button

☐ Enable page refresh every 60 seconds

Session Summary [Device Summary](#)

Generated on Fri Jul 01 00:01:35 MDT 2022

Service Uptime: 90 days, 11 hours 59 minutes

Number of Active Sessions: 1

Number of Sessions Created Since Service Boot: 6

Number of Existing Devices: 9

Number of Devices Created Since Service Boot: 66

	Session ID	User	Application	Far-end Identifier	Connection Type	# of Associated Devices
<input type="checkbox"/>	83277349CEDBC52DA E048EE9F239D8C5-7	taske	TASKE Recording .NET	10.33.1.80	XML Unencrypted	9

Terminate Sessions

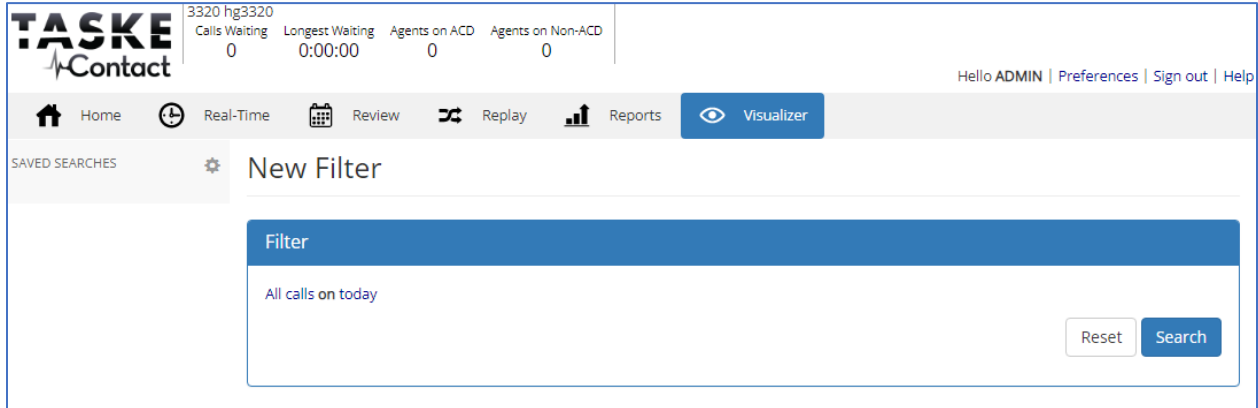
Show Terminated Sessions

Item 1-1 of 1

1 Go

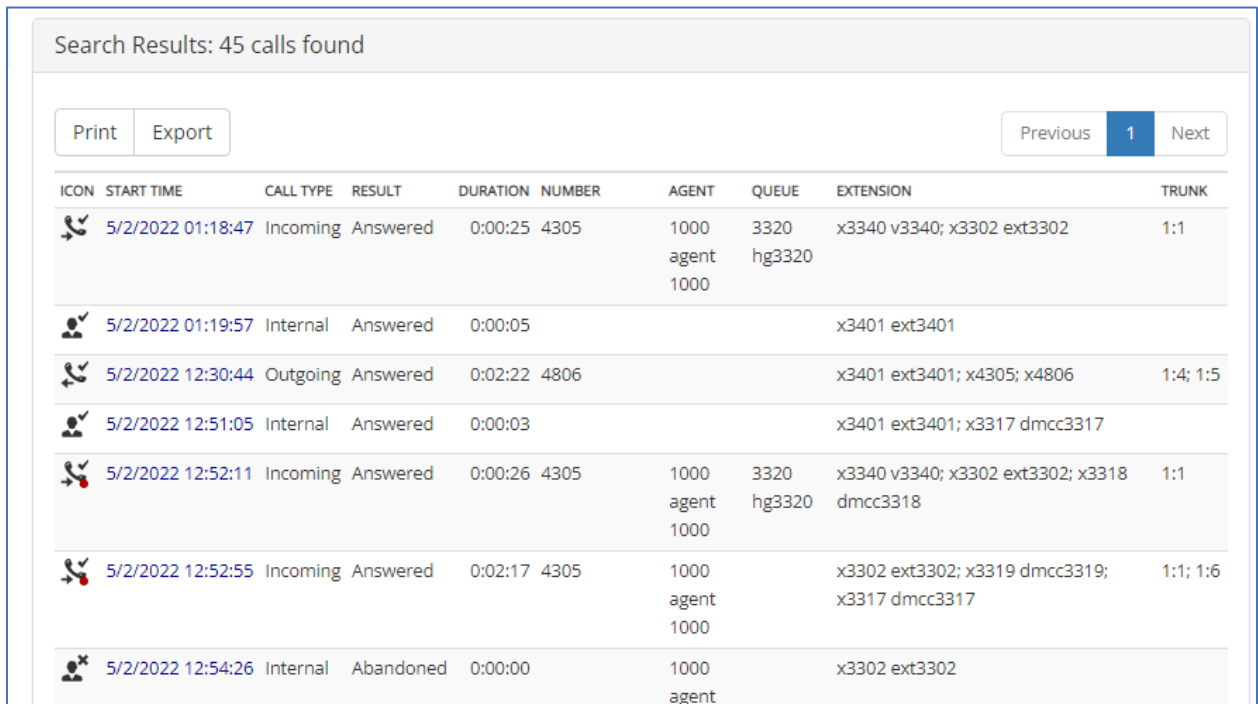
### 8.3. Verify TASKE Call Recording

Open the TASKE Contact web interface by entering its IP address or serve name as below <http://server2/TASKE/>, log in with appropriate username and password. In the home page of TASKE Contact, click on Visualizer and then click on Search button to search for recorded calls.



The screenshot shows the TASKE Contact web interface. At the top, there's a header with the TASKE Contact logo and a status bar showing 3320 hg3320, 0 Calls Waiting, 0:00:00 Longest Waiting, 0 Agents on ACD, and 0 Agents on Non-ACD. Below the header is a navigation bar with links: Home, Real-Time, Review, Replay, Reports, and Visualizer (which is highlighted). On the right of the navigation bar, it says "Hello ADMIN | Preferences | Sign out | Help". Below the navigation bar, there's a "SAVED SEARCHES" section and a "New Filter" dialog. The "New Filter" dialog has a "Filter" section with the text "All calls on today" and two buttons: "Reset" and "Search".

The list of recorded calls is displayed in the **Search Results** section as shown below.




The screenshot shows the "Search Results: 45 calls found" section. It includes a "Print" and "Export" button on the left, and "Previous", "1", and "Next" buttons on the right. Below these buttons is a table with the following columns: ICON, START TIME, CALL TYPE, RESULT, DURATION, NUMBER, AGENT, QUEUE, EXTENSION, and TRUNK. The table contains 6 rows of call data.


ICON	START TIME	CALL TYPE	RESULT	DURATION	NUMBER	AGENT	QUEUE	EXTENSION	TRUNK
	5/2/2022 01:18:47	Incoming	Answered	0:00:25	4305	1000 agent 1000	3320 hg3320	x3340 v3340; x3302 ext3302	1:1
	5/2/2022 01:19:57	Internal	Answered	0:00:05				x3401 ext3401	
	5/2/2022 12:30:44	Outgoing	Answered	0:02:22	4806			x3401 ext3401; x4305; x4806	1:4; 1:5
	5/2/2022 12:51:05	Internal	Answered	0:00:03				x3401 ext3401; x3317 dmcc3317	
	5/2/2022 12:52:11	Incoming	Answered	0:00:26	4305	1000 agent 1000	3320 hg3320	x3340 v3340; x3302 ext3302; x3318 dmcc3318	1:1
	5/2/2022 12:52:55	Incoming	Answered	0:02:17	4305	1000 agent 1000		x3302 ext3302; x3319 dmcc3319; x3317 dmcc3317	1:1; 1:6
	5/2/2022 12:54:26	Internal	Abandoned	0:00:00		1000 agent		x3302 ext3302	



Click on one of recorded calls in the list, the **Call Details** section displays information of call such as start time, end time, from, to, call type, duration...etc.

### Call Details

[Print](#)
[Email](#)
[Previous Call](#)
[Next Call](#)
[Back to Results](#)


Outgoing Call


Start time	5/4/2022 11:18:53	Type	Answered; Outgoing
End time	5/4/2022 11:20:46	Duration	0:01:53
From	x3401 ext3401 	Time To Answer	0:00:10
To	(613)967-5085	Total Talk Time	0:01:09
UCID	00001000341651699128		

S
C
C
H
C
H
C

The recorded call can be played back by click on the speaker icon in the **Call Recordings** section.

### Call Recordings

Call
Segment 1 at 11:19:03 AM


#### Event List

START TIME	EVENT	DURATION	RESOURCES
11:18:53	Started	0:00:10	x3401 ext3401
11:19:03	Answered	0:00:00	3:2
11:19:03	Answered	0:00:17	3:2 Monitored by x3317 dmcc3317
11:19:20	On Hold	0:00:16	x3401 ext3401
11:19:36	Answered	0:00:22	x3401 ext3401 Monitored by x3317 dmcc3317
11:19:58	On Hold	0:00:18	x3401 ext3401
11:20:16	Answered	0:00:30	x3401 ext3401 Monitored by x3317 dmcc3317
11:20:46	Disconnect		x3401 ext3401

## 9. Conclusion

These Application Notes describe the configuration steps required for TASKE Call Recording to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement Services. All feature and serviceability test cases were completed successfully.

## 10. Additional References

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

- [1] Administering Avaya Aura® Communication Manager, Release 10.1, Issue 1, December 2021.
- [2] Administering Avaya Aura® Session Manager, Release 10.1, Issue 1, April 2021.
- [3] Administering Avaya Aura® Application Enablement Services, Release 10.1, Issue 4, April 2022

Product documentation for TASKE Call Recording may be found at <http://www.taske.com/support/documentation.php>.

- [4] TASKE Installation Guide for Avaya Aura® Communication Manager with Aura® Application Enablement Services.
- [5] Administration Guide for TASKE Contact for Avaya Aura® Communication Manager with Aura® Application Enablement Services.
- [6] TASKE Contact Web Portal Report Reference Guide for Avaya Aura® Communication Manager with Aura® Application Enablement Services.
- [7] TASKE Contact Web Portal User Guide for Avaya Aura® Communication Manager with Aura® Application Enablement Services.

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