



Avaya Solution & Interoperability Test Lab

Application Notes for TASKE Contact with Avaya Aura® Communication Manager using Avaya Aura® Application Enablement Services – Issue 1.0

Abstract

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

In the compliance testing, TASKE Contact used the Telephony Services Application Programming Interface from Avaya Aura® Application Enablement Services to monitor contact center devices on Avaya Aura® Communication Manager and used the event reports from the monitored devices to produce real-time and historical reports.

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 Contact to interoperate with Avaya Aura® Communication Manager using Avaya Aura® Application Enablement Services.

In the compliance testing, TASKE Contact used the Telephony Services Application Programming Interface (TSAPI) from Avaya Aura® Application Enablement Services to monitor contact center devices on Avaya Aura® Communication Manager and used the event reports from the monitored devices to produce real-time and historical reports.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the TASKE Contact application, the application automatically queried for device status and requested monitoring.

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

The serviceability test cases were performed manually by disconnecting and reconnecting the LAN cable to the TASKE Contact 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 this DevConnect Application Note included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

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

For the testing associated with this Application Note, the interface between Avaya systems and the TASKE application did not include use of any specific encryption features as requested by TASKE

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on TASKE Contact:

- Handling of TSAPI messages in the areas of event notification and value queries.
- Proper display of monitored device status in the real-time reports.

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

2.2. Test Results

All test cases were executed and passed.

2.3. Support

Technical support on TASKE Contact can be obtained through the following:

- **Phone:** (877) 778-2753
- **Web :** http://www.taske.com/forms/form_asksupport.html

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 Contact requested monitoring on the VDN, skill group, and agent telephone extensions.

| Device Type | Extension |
|-----------------|------------------|
| VDN | 3340 |
| Skill Group | 3320 |
| Agent IDs | 1000, 1001, 1002 |
| Agent Telephone | 3301, 3401, 3303 |

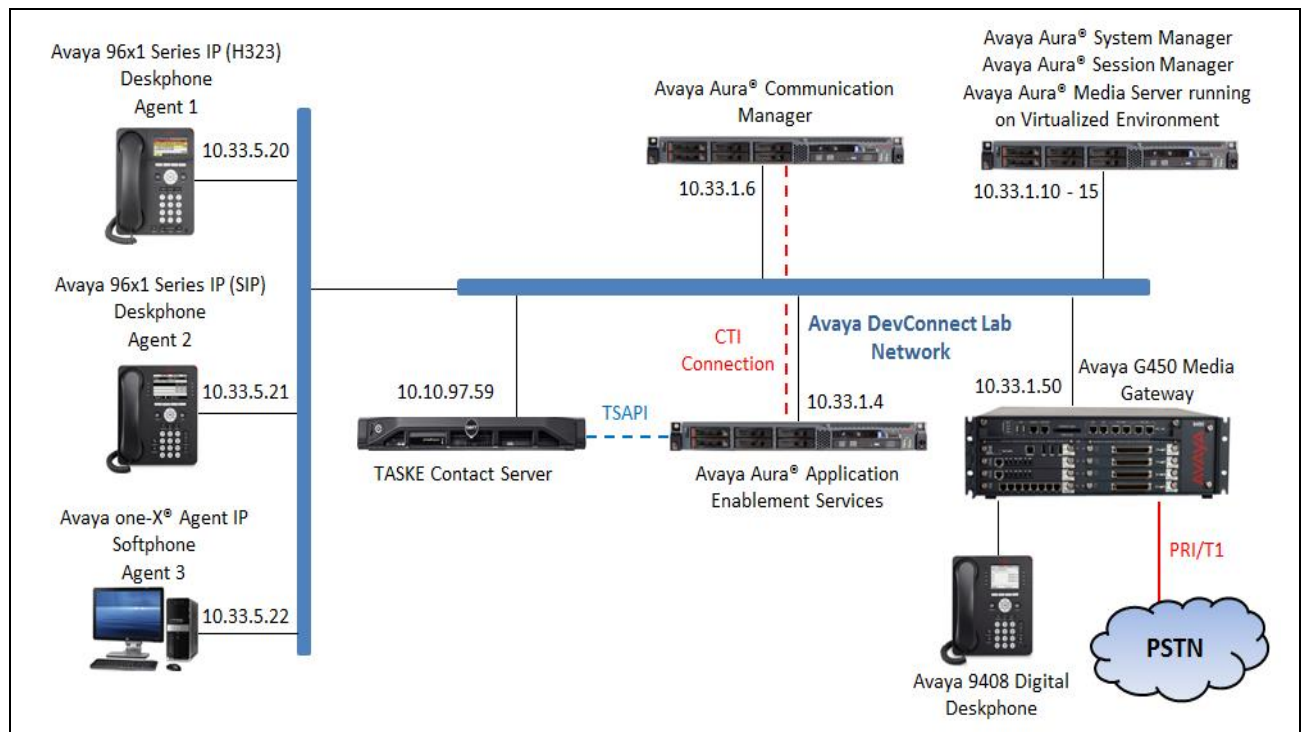


Figure 1: Avaya Network with TASKE Contact Server

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 | 8.0 (R018x.00.0.822.0) |
| Avaya Aura® Application Enablement Services running on virtualized environment | 8.0 (8.0.0.0.6-0) |
| Avaya Aura® Session Manager running on virtualized environment | 8.0 (8.0.0.0.800035) |
| Avaya Aura® System Manager | 8.0 (8.0.0.0.931077) |
| Avaya Aura® Media Server | 8.0 (8.0.0.117) |
| Avaya G450 Media Gateway | 40 .10 .0 |
| Avaya 96x1 Series IP Telephone <ul style="list-style-type: none">• 9611G (H.323)• 9641GS (SIP) | 6.6604 7.1.3.0.8 |
| Avaya one-X® Agent H.323 Softphone | 6.2.5 |
| TASKE Contact on Windows 2012 R2 Standard Server with Service Pack 1 <ul style="list-style-type: none">• Avaya TSAPI Windows Client | 2018 tsapi-client-win32-8.0.0-38.zip |

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

5.1. Verify Communication Manager License

Log in to the System Access Terminal (SAT) 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)? y          Authorization Codes? y
Analog Trunk Incoming Call ID? y          CAS Branch? n
A/D Grp/Sys List Dialing Start at 01? y    CAS Main? n
Answer Supervision by Call Classifier? y    Change COR by FAC? n
ARS? y      Computer Telephony Adjunct Links? y
ARS/AAR Partitioning? y    Cvg Of Calls Redirected Off-net? y
ARS/AAR Dialing without FAC? n    DCS (Basic)? y
ASAI Link Core Capabilities? y    DCS Call Coverage? y
ASAI Link Plus Capabilities? y    DCS with Rerouting? y
Async. Transfer Mode (ATM) PNC? n
Async. Transfer Mode (ATM) Trunking? n    Digital Loss Plan Modification? y
ATM WAN Spare Processor? n              DS1 MSP? y
ATMS? y      DS1 Echo Cancellation? 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
Extension: 3222
Type: ADJ-IP
Name: AES70
COR: 1
```

5.3. Administer AE Services

To administer the transport link to AES, use the command “**change 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 Type | Enabled | Local Node | Local Port | Remote Node | Remote Port | | |
| AESVCS | y | procr | 8765 | | | | |

Go to **Page 4**, enter the following values. **AE Services Server** should be the host name of AES server, 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: | aes70 | * | y | in use | | | |

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 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.

Recommended access to System Manager is via FQDN.

[Go to central login for Single Sign-On](#)

If IP address access is your only option, then note that authentication will fail in the following cases:

- First time login with "admin" account
- Expired/Reset passwords

Use the "Change Password" hyperlink on this page to change the password manually, and then login.

Also note that single sign-on between servers in the same security domain is not supported when accessing via IP address.

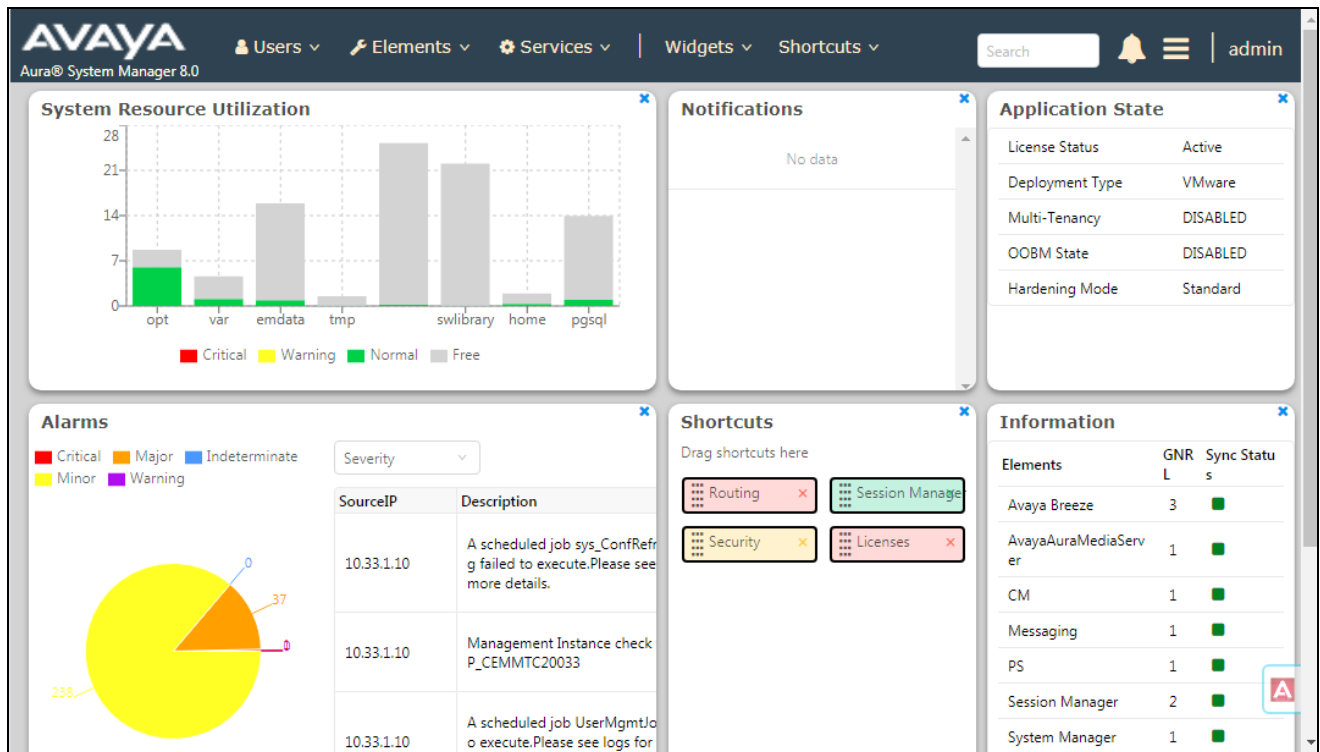
User ID:

Password:

[Change Password](#)

Supported Browsers: Internet Explorer 11.x or Firefox 48.0, 49.0 and 50.0.

From the System Manager dashboard, select the service **Licenses** under the **Services** column (not shown).



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**, as shown below.

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

CE

▶ COLLABORATION_ENVIRONMENT

COMMUNICATION_MANAGER

▶ Call_Center

▶ Communication_Manager

Configure Centralized Licensing

MESSAGING

▶ Messaging

Application Enablement (CTI) - Release: 8 - SID: XXXXXXXXXX (Enterprise license file)

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

License installed on: August 15, 2018 3:22:54 PM +00:00

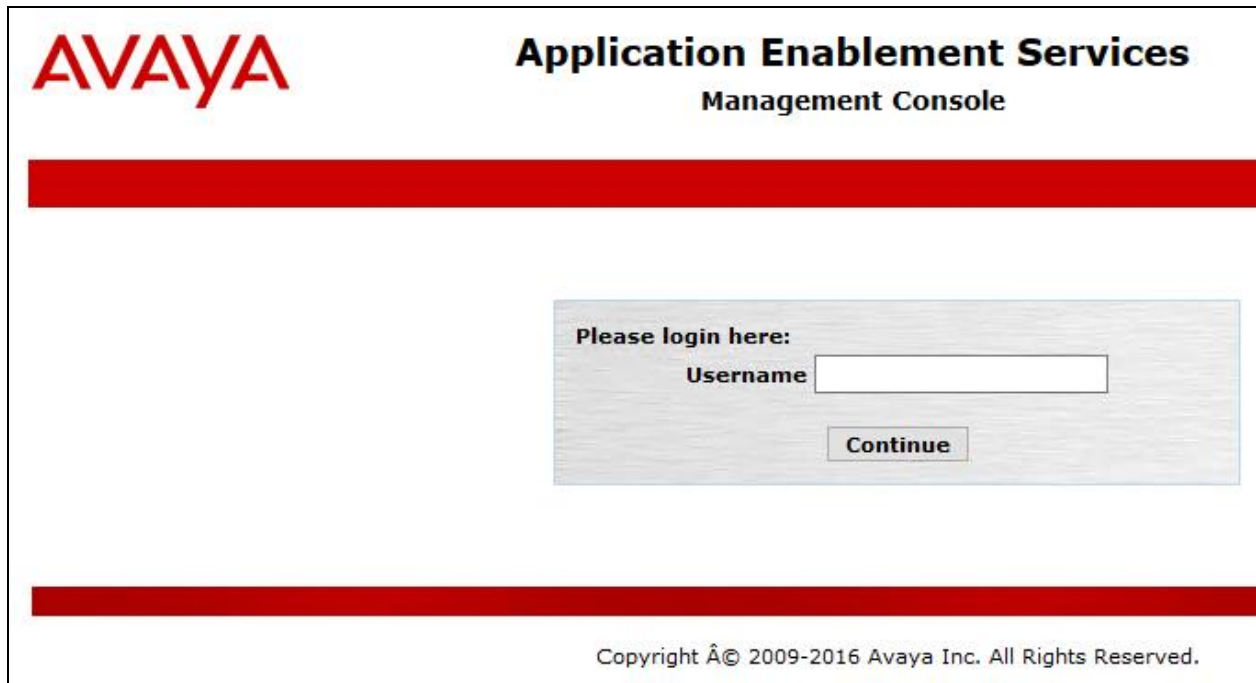
License File Host IDs: XXXXXXXXXX

| Feature (License Keyword) | License Capacity | Currently available |
|--|------------------|------------------------|
| Device Media and Call Control (VALUE_AES_DMCC_DMC) | 100 | 100 |
| AES ADVANCED LARGE SWITCH (VALUE_AES_AEC_LARGE_ADVANCED) | 100 | 100 |
| AES HA LARGE (VALUE_AES_HA_LARGE) | 10 | 10 |
| AES ADVANCED MEDIUM SWITCH (VALUE_AES_AEC_MEDIUM_ADVANCED) | 100 | 100 |
| Unified CC API Desktop Edition (VALUE_AES_AEC_UNIFIED_CC_DESKTOP) | 100 | 97 |
| CVLAN ASAI (VALUE_AES_CVLAN_ASAI) | 100 | 100 |
| AES HA MEDIUM (VALUE_AES_HA_MEDIUM) | 10 | 10 |
| AES ADVANCED SMALL SWITCH (VALUE_AES_AEC_SMALL_ADVANCED) | 100 | 100 |
| DLG (VALUE_AES_DLG) | 100 | 100 |
| TSAPI Simultaneous Users (VALUE_AES_TSAPI_USERS) | 100 | 96 |
| CVLAN Proprietary Links (VALUE_AES_PROPRIETARY_LINKS) | 100 | 100 |

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 in red. To its right, the text "Application Enablement Services" is displayed in bold black, with "Management Console" below it in a smaller black font. A thick red horizontal bar spans the width of the page below the header. In the center, there 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. Another thick red horizontal bar is located at the bottom of the page, just above the copyright notice. The copyright notice at the very bottom reads: "Copyright © 2009-2016 Avaya Inc. All Rights Reserved."

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 displays user information: "Welcome: User cust", "Last login: Fri Sep 21 03:46:18 2018 from 172.16.99.2", "Number of prior failed login attempts: 0", "HostName/IP: aes70/10.33.1.4", "Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE", "SW Version: 8.0.0.0.0.6-0", "Server Date and Time: Fri Sep 21 11:37:08 EDT 2018", and "HA Status: Not Configured". A red navigation bar contains "Home", "Home | Help | Logout", and 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 is titled "Welcome to OAM" and contains a paragraph: "The AE Services Operations, Administration, and Management (OAM) Web provides you with tools for managing the AE Server. OAM spans the following administrative domains:". Below this is a bulleted list of domains and their functions: "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.", and "Utilities - Use Utilities to carry out basic connectivity tests."

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" screen. The left navigation pane is expanded to "Communication Manager Interface" and "Switch Connections" is selected. The main content area is titled "Connection Details - interopcm" and contains a form with the following fields: "Switch Password" (password field), "Confirm Switch Password" (password field), "Msg Period" (text field with value "30" and label "Minutes (1 - 72)"), "Provide AE Services certificate to switch" (checkbox), "Secure H323 Connection" (checkbox), and "Processor Ethernet" (checkbox with a checkmark). At the bottom of the form are "Apply" and "Cancel" buttons.

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


**Application Enablement Services
Management Console**

Welcome: User cust
Last login: Fri Sep 21 12:20:58 2018 from 172.16.99.2
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.6-0
Server Date and Time: Fri Sep 21 13:04:11 EDT 2018
HA Status: Not Configured

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


Switch Connections

Add Connection

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

Edit Connection
Edit PE/CLAN IPs
Edit H.323 Gatekeeper
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.


**Application Enablement Services
Management Console**

Welcome: User cust
Last login: Fri Sep 21 12:20:58 2018 from 172.16.99.2
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.6-0
Server Date and Time: Fri Sep 21 13:06:10 EDT 2018
HA Status: Not Configured

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 - interopcm

Add/Edit Name or IP

| Name or IP Address | Status |
|--------------------|--------|
| 10.33.1.6 | In Use |

Back

Select **Edit H.323 Gatekeeper** button to add an IP address of gate keeper, the Gatekeeper IP address in this case is also the Processor Ethernet.

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 H.323 Gatekeeper - interopcm

Name or IP Address

☒ 10.33.1.6

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: Fri Sep 21 03:46:18 2018 from 172.16.99.2
 Number of prior failed login attempts: 0
 HostName/IP: aes70/10.33.1.4
 Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
 SW Version: 8.0.0.0.6-0
 Server Date and Time: Fri Sep 21 11:40:32 EDT 2018
 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
 Licensing
 Maintenance

TSAPI Links

| Link | Switch Connection | Switch CTI Link # | ASAI Link Version | Security |
|------|-------------------|-------------------|-------------------|----------|
| | | | | |

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 switch connection as configured in **Section 6.3** from the drop-down list. In this case, the existing switch connection “interopcm” 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 displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo and the title 'Application Enablement Services Management Console'. A user welcome message is visible in the top right corner, indicating the user is 'cust' and providing login details. The main navigation bar shows 'AE Services | TSAPI | TSAPI Links' and links for 'Home | Help | Logout'. The left sidebar contains a tree view with 'AE Services' expanded, showing sub-items like CVLAN, DLG, DMCC, SMS, TSAPI (expanded), TSAPI Links (selected), TSAPI Properties, TWS, Communication Manager Interface, High Availability, Licensing, and Maintenance. The main content area is titled 'Add TSAPI Links' and contains the following configuration fields:

- Link: 1
- Switch Connection: interopcm
- Switch CTI Link Number: 1
- ASAI Link Version: 8
- Security: Both

At the bottom of the configuration area are two buttons: 'Apply Changes' and 'Cancel Changes'.

6.5. Enable Security Database

Enable the security database for use by TASKE Contact. 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. Check **Enable SDB for TSAPI Service, JTAPI and Telephony Web Services**.

AVAYA **Application Enablement Services**
Management Console

Welcome: User cust
Last login: Fri Sep 21 03:46:18 2018 from 172.16.99.2
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.0.6-0
Server Date and Time: Fri Sep 21 11:54:19 EDT 2018
HA Status: Not Configured

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

CTI Users

▪ Devices

▪ Device Groups

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 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: Fri Sep 21 03:46:18 2018 from 172.16.99.2
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.6-0
Server Date and Time: Fri Sep 21 11:59:07 EDT 2018
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. Administer Security Database

All devices that are monitored by TASKE Contact need to be configured in the security database. Select **Security → Security Database → Devices**, and add a device for each VDN, skill group, and agent telephone extensions from **Section 3**.

In the subsequent **Add / Edit Device** screen (not shown), select the appropriate **Device Type**, and select “Any” for **Tlink Group**.

A listing of the configured devices used for the compliance testing is shown below. Note the **Tlink Group** and **Device Type** settings.

AVAYA Application Enablement Services
Management Console

Last login: Fri Sep 21 03:46:18 2018 from 172.16.99.2
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.0.6-0
Server Date and Time: Fri Sep 21 11:54:19 EDT 2018
HA Status: Not Configured

Security | Security Database | DevicesHome | 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

▪ **Devices**

▪ Device Groups

Devices

Upload devices from file No file chosen

| <input type="checkbox"/> | Device ID | Tlink Group | Device Type | Location |
|--------------------------|-----------|-------------|-------------|----------|
| <input type="checkbox"/> | 1000 | Any | AGENT ID | |
| <input type="checkbox"/> | 1001 | Any | AGENT ID | |
| <input type="checkbox"/> | 1002 | Any | AGENT ID | |
| <input type="checkbox"/> | 3301 | Any | PHONE | |
| <input type="checkbox"/> | 3303 | Any | PHONE | |
| <input type="checkbox"/> | 3320 | Any | ACD | |
| <input type="checkbox"/> | 3340 | Any | VDN | |
| <input type="checkbox"/> | 3352 | Any | PHONE | |
| <input type="checkbox"/> | 3353 | Any | VDN | |
| <input type="checkbox"/> | 3401 | Any | PHONE | |

6.8. 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#INTEROPCM#CSTA#AES70”. Note the use of the switch connection “INTEROPCM” from **Section 6.4** as part of the Tlink name.

The screenshot displays the Avaya Application Enablement Services Management Console. The top header includes the Avaya logo, the title "Application Enablement Services Management Console", and a welcome message for user "cust" with login details. A red navigation bar contains "Security | Security Database | Tlinks" and links for "Home | Help | Logout". The left sidebar shows a tree view with categories like "AE Services", "Communication Manager Interface", "High Availability", "Licensing", "Maintenance", "Networking", and "Security". Under "Security", "Security Database" is expanded, showing sub-items like "Control", "CTI Users", "Devices", "Device Groups", and "Tlinks". The main content area, titled "Tlinks", lists four Tlink names with radio buttons: "AVAYA#INTEROPCM#CSTA#AES70" (selected and highlighted with a red box), "AVAYA#INTEROPCM#CSTA#LOCALHOST", "AVAYA#INTEROPCM#CSTA-S#AES70", and "AVAYA#INTEROPCM#CSTA-S#LOCALHOST". A "Delete Tlink" button is located below the list.

6.9. 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.

AVAYA **Application Enablement Services**
Management Console

Welcome: User cust
Last login: Fri Sep 21 03:46:18 2018 from 172.16.99.2
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.6-0
Server Date and Time: Fri Sep 21 11:54:19 EDT 2018
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 Id

* Common Name

* Surname

* User Password

* Confirm Password

Admin Note

Avaya Role

Business Category

Car License

CM Home

Css Home

CT User

Department Number

Display Name

Employee Number

Employee Type

Enterprise Handle

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.

AVAYA **Application Enablement Services**
Management Console

Welcome: User cust
Last login: Sun Sep 23 00:27:49 2018 from 135.10.98.86
Number of prior failed login attempts: 0
HostName/IP: aes70/10.33.1.4
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.0.0.0.6-0
Server Date and Time: Sun Sep 23 00:49:47 EDT 2018
HA Status: Not Configured

[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

Edit CTI User

User Profile:

User ID
Common Name
Worktop Name
Unrestricted Access

Taske
Taske

NONE ▼

☒

Call and Device Control:

Call Origination/Termination and Device Status

None ▼

Call and Device Monitoring:

Device Monitoring
Calls On A Device Monitoring
Call Monitoring

None ▼

None ▼

☐

Routing Control:

Allow Routing on Listed Devices

None ▼

Apply Changes

Cancel Changes

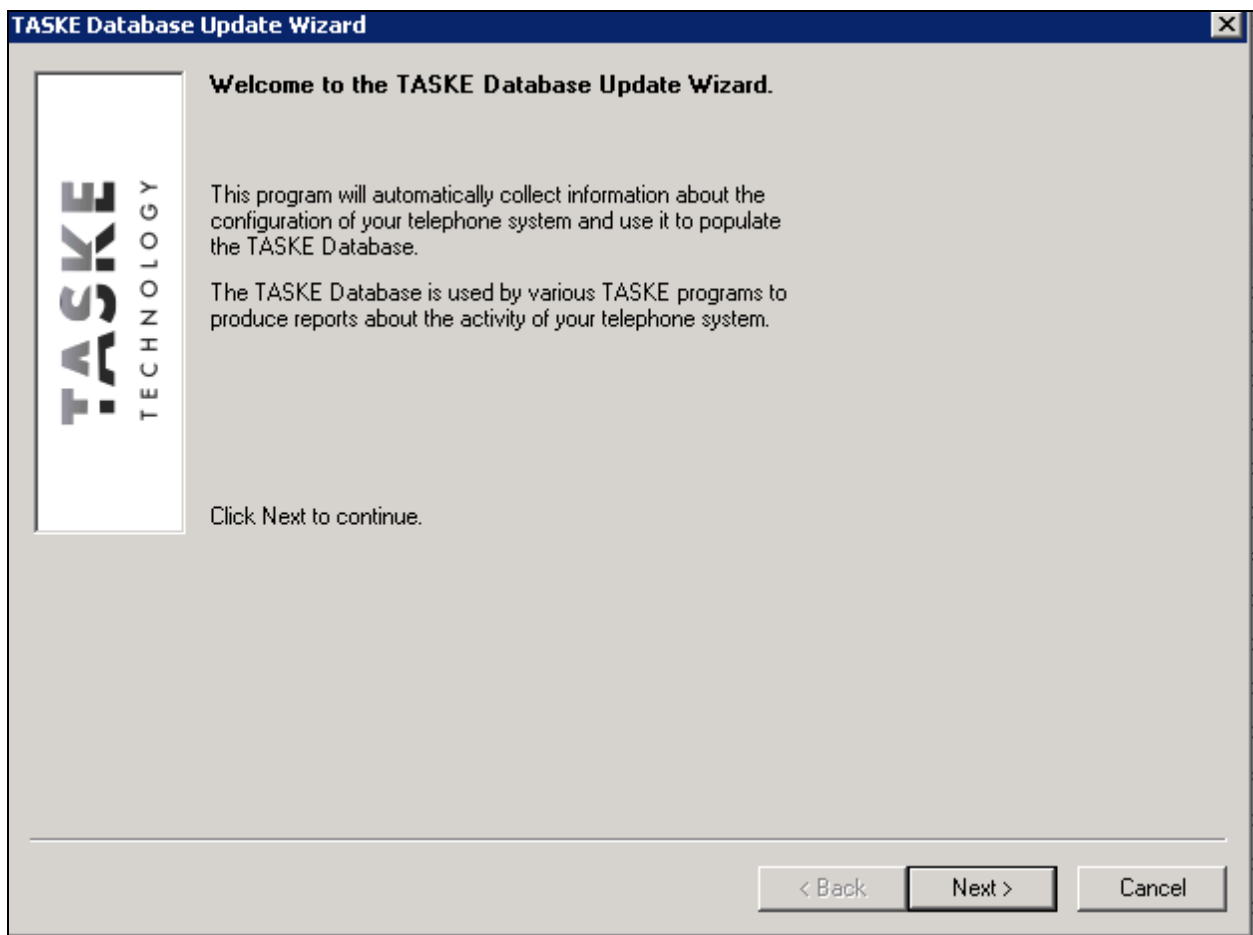
7. Configure TASKE Contact

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 supervisors
- Restart components

7.1. Administer TASKE Database Update Wizard

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



Navigate forward to the **Import Communication Manager Information** 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**.

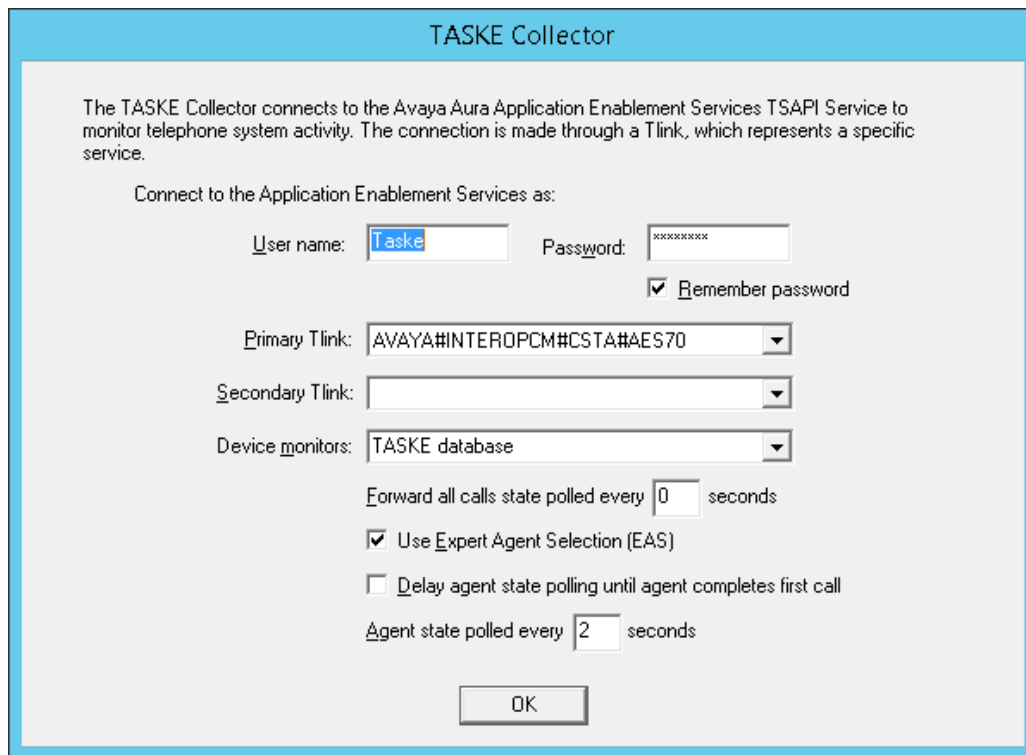
In the compliance testing, the manual method was used to configure the contact center devices on TASKE, therefore all default values were retained on the TASKE Database Update Wizard.

The screenshot shows a Windows-style dialog box titled "TASKE Database Update Wizard". On the left is a vertical logo for "TASKE TECHNOLOGY". The main area is titled "Import Communication Manager Information." and contains the instruction: "Select the folder which contains the data files exported from the Avaya Site Administration utility." Below this is a "Folder:" label followed by a text input field and a "Browse" button. Further down is the instruction "Click Import to collect updated information." followed by an "Import" button. At the bottom right are three buttons: "< Back", "Next >", and "Cancel".

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 6.8**.

For **User name** and **Password**, enter the TASKE user credentials from **Section 6.9**. Check **Remember password** if desired.



The screenshot shows the 'TASKE Collector' configuration window. It contains a text box explaining the collector's function, followed by fields for 'User name' (set to 'Taske'), 'Password' (masked with 'xxxxxxx'), and a checked 'Remember password' checkbox. Below these are dropdown menus for 'Primary Tlink' (set to 'AVAYA#INTEROPCM#CSTA#AES70'), 'Secondary Tlink' (empty), and 'Device monitors' (set to 'TASKE database'). There are also input fields for 'Forward all calls state polled every' (set to '0') and 'Agent state polled every' (set to '2') seconds. Checkboxes for 'Use Expert Agent Selection (EAS)' and 'Delay agent state polling until agent completes first call' are present. An 'OK' button is at the bottom.

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: ☒ Remember password

Primary Tlink:

Secondary Tlink:

Device monitors:

Forward all calls state polled every seconds

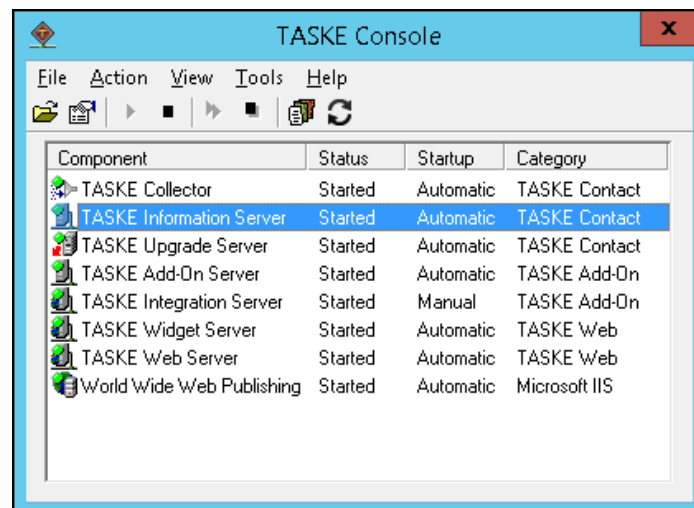
☒ Use Expert Agent Selection (EAS)

☐ Delay agent state polling until agent completes first call

Agent state polled every seconds

OK

The **TASKE Console** screen is displayed next. Select **Tools → Administrator** (not shown) from the top menu.



The screenshot shows the 'TASKE Console' window with a menu bar (File, Action, View, Tools, Help) and a toolbar. Below is a table listing various components and their status.

| Component | Status | Startup | Category |
|---------------------------|---------|-----------|---------------|
| TASKE Collector | Started | Automatic | TASKE Contact |
| TASKE Information Server | Started | Automatic | TASKE Contact |
| TASKE Upgrade Server | Started | Automatic | TASKE Contact |
| TASKE Add-On Server | Started | Automatic | TASKE Add-On |
| TASKE Integration Server | Started | Manual | 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. Administer Extensions

The **TASKE Administrator** screen is displayed. Select **Extensions** from the left pane, followed by **New** in the right pane to create an extension record.

In the lower right pane, enter the first agent telephone extension from **Section 3** in the **ID** field. Enter a desired **Name**. For **Extension Type**, select “Normal” for agent telephone extensions and “VDN” for VDN extensions.

Repeat this procedure for all agent telephone and VDN extensions from **Section 3**. In the compliance testing, three extension records were created as shown below.

The screenshot shows the TASKE Administrator application window. The title bar reads "TASKE Administrator". The menu bar includes "File", "View", "Tools", and "Help". On the left is a vertical navigation pane with buttons for "Trunks", "Trunk Groups", "Extensions" (which is highlighted), "Extension Groups", "Agents", "Agent Groups", "Queues", "Queue Groups", "DNIS", "DNIS Groups", "Spectrums", "Report Options", "Range", and "Users". The main area is titled "List Of Extensions (Total = 6) Monitors: 1 VDNs, 3 extensions, 0 on agent logon". It contains a table with the following data:

| ID | Name | Nickname | Extension Type | Start |
|------|--------------|----------|----------------|-------|
| 3301 | Station 3301 | x3301 | Normal | Yes |
| 3303 | Station 3303 | x3303 | Normal | Yes |
| 3340 | VDN 3340 | v3340 | VDN | Yes |
| 3352 | Station 3352 | x3352 | Normal | No |
| 3353 | VDN 3353 | v3353 | VDN | No |
| 3401 | Station 3401 | x3401 | Normal | Yes |

Below the table is the "Extension Record Details:" pane. It includes buttons for "New", "Duplicate", "Update", and "Delete". The form fields are as follows:

- ID: 3301
- Name: Station 3301
- Nickname: x3301
- Is a Member Of: (empty)
- Extension Type: Normal (dropdown menu)
- Start Monitor: Yes (dropdown menu)

There is also a section for "Is a Member Of:" with sub-fields for ID, Name, and Nickname, which are currently empty.

7.4. Administer Agents

Select **Agents** from the left pane, followed by **New** in the right pane to create an agent record.

In the lower right pane, enter the first agent ID from **Section 3** in the **ID** field. Enter a desired **Name**.

Repeat this procedure for all agent IDs from **Section 3**. In the compliance testing, three agent records were created as shown below.

The screenshot shows the TASKE Administrator application window. The title bar reads "TASKE Administrator". The menu bar includes "File", "View", "Tools", and "Help". On the left is a vertical navigation pane with buttons for "Trunks", "Trunk Groups", "Extensions", "Extension Groups", "Agents" (highlighted), "Agent Groups", "Queues", "Queue Groups", "DNIS", "DNIS Groups", "Spectrums", "Report Options", "Range", and "Users".

The main area is divided into two panes. The top pane, titled "List Of Agents (Total = 3)", contains a table:

| ID | Name | Nickname |
|------|------------|----------|
| 1000 | Agent 1000 | a1000 |
| 1001 | Agent 1001 | a1001 |
| 1002 | Agent 1002 | a1002 |

The bottom pane, titled "Agent Record Details:", contains buttons for "New", "Duplicate", "Update", and "Delete". Below these are input fields for "ID" (1000), "Name" (Agent 1000), and "Nickname" (a1000). Under the heading "Is a Member of:", there is a table:

| ID | Name | Nickname |
|------|------------------|----------|
| 3320 | Agent Group 3320 | ag3320 |

7.5. Administer Agent Groups

Select **Agent Groups** from the left pane, followed by **New** in the right pane to create an agent group record.

In the lower right pane, enter the first skill group extension from **Section 3** in the **ID** field. Enter a desired **Name**. Under **Available Agents**, select all agents and click the **Add All** button to move under **Agent Members**.

Repeat this procedure for all skill groups from **Section 3**. In the compliance testing, one agent group record was created.

The screenshot shows the TASKE Administrator application window. The title bar reads "TASKE Administrator". The menu bar includes "File", "View", "Tools", and "Help". On the left is a vertical navigation pane with buttons for "Trunks", "Trunk Groups", "Extensions", "Extension Groups", "Agents", "Agent Groups" (which is highlighted), "Queues", "Queue Groups", "DNIS", "DNIS Groups", "Spectrums", "Report Options", "Range", and "Users".

The main area is titled "List Of Agent Groups [Total = 1]". It contains a table with the following data:

| ID | Name | Nickname |
|------|------------------|----------|
| 3320 | Agent Group 3320 | ag3320 |

Below this table is the "Agent Group Record Details:" section. It includes buttons for "New", "Duplicate", "Update", and "Delete". Below these buttons are input fields for "ID" (3320), "Name" (Agent Group 3320), and "Nickname" (ag3320).

At the bottom, there are two tables: "Available Agents" and "Agent Members".

| ID | Name | Nickname |
|----|------|----------|
|----|------|----------|

Between the two tables are buttons: "Add All", "Add", "Remove", and "Remove All".

| ID | Name |
|------|------------|
| 1000 | Agent 1000 |
| 1001 | Agent 1001 |
| 1002 | Agent 1002 |

7.6. Administer Queues

Select **Queues** from the left pane, followed by **New** in the right pane to create a queue record.

In the lower right pane, enter the first skill group extension from **Section 3** in the **ID** field. Enter a desired **Name**. For **Agent Group**, select the appropriate agent group ID from **Section 7.5**.

Repeat this procedure for all skill groups from **Section 3**. In the compliance testing, one queue record was created.

The screenshot displays the TASKE Administrator application window. On the left is a vertical navigation pane with buttons for Trunks, Trunk Groups, Extensions, Extension Groups, Agents, Agent Groups, Queues (which is highlighted), Queue Groups, DNIS, DNIS Groups, Spectrums, Report Options, Range, and Users. The main area is titled 'List Of Queues (Total = 1) Monitors: 1' and contains a table with one record:

| ID | Name | Nickname | Start Monitor |
|------|------------|----------|---------------|
| 3320 | Skill 3320 | s3320 | Yes |

Below the table is the 'Queue Record Details' section. It includes buttons for 'New', 'Duplicate', 'Update', and 'Delete'. The form fields are as follows:

- ID: 3320
- Name: Skill 3320
- Nickname: s3320
- TSF Time: 30
- Agent Group: 3320 (selected from a dropdown)
- Start Monitor: Yes (selected from a dropdown)
- Interflow Diverted Calls: ☒

There is also a section 'Is a Member Of:' with a table for listing other queues, which is currently empty.

7.7. Administer Supervisors

Select **Users** from the left pane, followed by **New** in the right pane to create a user record.

In the lower right pane, enter the desired **User name**, **Full name**, **Password**, and **Confirm password**. For **Type**, select “Supervisor” from the drop-down list.

The screenshot shows the TASKE Administrator application window. The left pane contains a navigation menu with the following items: Trunks, Trunk Groups, Extensions, Extension Groups, Agents, Agent Groups, Queues, Queue Groups, DNIS, DNIS Groups, Spectrums, Report Options, Range, and Users (selected). The main area is divided into two panes. The top pane, titled 'List of Users [Total = 1]', contains a table with the following data:

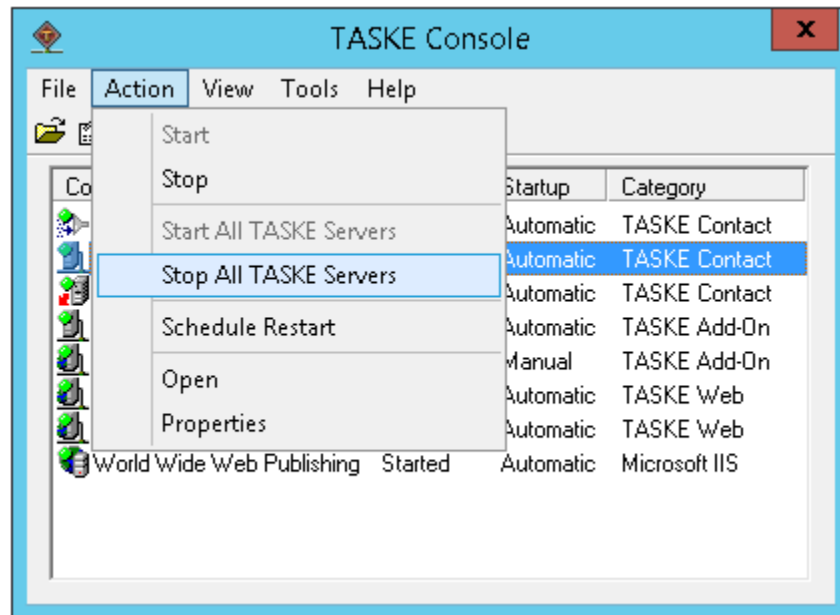
| ID | Name | Type |
|-------|------------------|------------|
| avaya | Avaya DevConnect | Supervisor |

The bottom pane, titled 'User Record Details:', contains the following fields and controls:

- User name:** avaya
- Full name:** Avaya DevConnect
- Password:** [masked]
- Confirm password:** [masked]
- Type:** Supervisor (dropdown menu)
- Agent ID:** [empty] (with a 'Browse...' button)
- Extension:** [empty] (with a 'Browse...' button)
- Change password on next sign in:** ☐
- Suspended:** No (dropdown menu)
- Permissions:** Select the access you want to grant this user.
 - ☐ Restrict user's resource access (with a 'Resource Permissions...' button)
 - ☐ Allow user to access Administrator
- Application Types:**
 - ☐ Desktop
 - ☐ With Advanced Options
 - ☐ With Agent Skill Management
 - ☒ Web Portal
 - ☐ With Enterprise
 - ☐ DisplayCentral Designer

7.8. 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 proper configuration of Avaya Aura® Communication Manager, Avaya Aura® Application Enablement Services, and TASKE Contact.

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 | 8 | no | aes70 | 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 | Switch Conn SummaryHome | 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

Switch Connections Summary

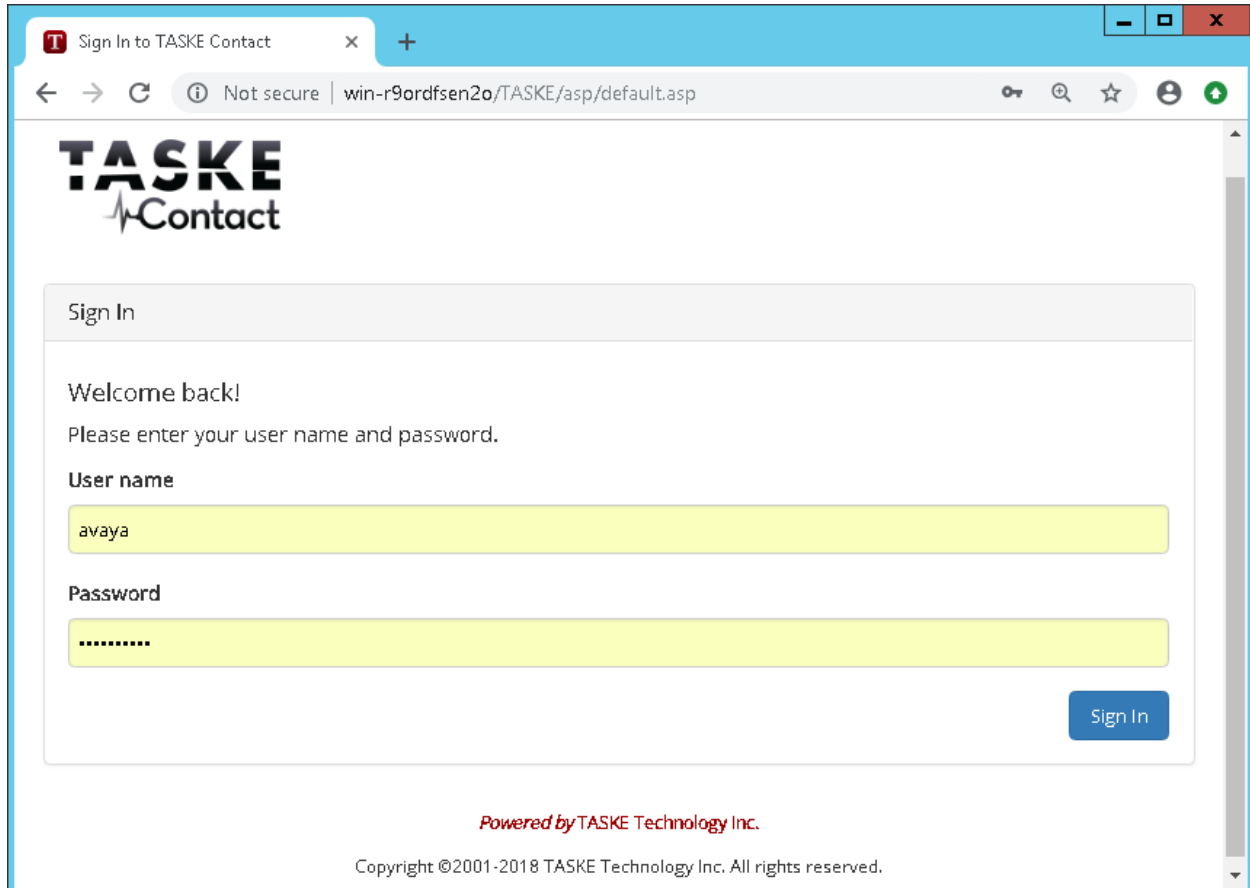
☐ Enable page refresh every 60 seconds

| | Switch Conn | Conn State | Processor Ethernet | Since | Online/ Offline | Active/ Standby/ Admin'd AEP Conns | Num of TCI Conns | SSL | Msgs To Switch | Msgs From Switch | Msg Period |
|----------------------------------|-------------|------------|--------------------|--------------------------|-----------------|------------------------------------|------------------|---------|----------------|------------------|------------|
| <input checked="" type="radio"/> | interopcm | Talking | Yes | Wed Sep 19 13:53:34 2018 | Online | 1 / 0 / 1 | 2 | Enabled | 2625 | 1493 | 30 |

OnlineOfflineConnection DetailsPer Service Connections Details

8.3. Verify TASKE Contact

Access the supervisor web-based interface by using the URL “http://ip-address/taske/login.htm” in an Internet browser window, where “ip-address” is the IP address of TASKE Contact server. The **Sign In** screen is displayed. Log in using the appropriate credentials from **Section 7.7**.



The screenshot shows a web browser window with the title "Sign In to TASKE Contact". The address bar displays "win-r9ordfsen2o/TASKE/asp/default.asp" and indicates "Not secure". The page features the TASKE Contact logo at the top left. Below the logo is a "Sign In" section with a light gray header. Inside this section, it says "Welcome back!" and "Please enter your user name and password." There are two input fields: "User name" with the text "avaya" and "Password" with masked characters ".....". A blue "Sign In" button is located at the bottom right of the input fields. At the bottom of the page, it says "Powered by TASKE Technology Inc." and "Copyright ©2001-2018 TASKE Technology Inc. All rights reserved."

The **My Home** screen is displayed next. Log an agent in and answer an ACD call. Verify that the screen is automatically updated with the proper status, as shown below.

TASKE Contact

Not secure | win-r9ordfsen2o/TASKE/asp/index.asp

TASKE Contact

Hello AVAYA | [Preferences](#) | [Sign out](#) | [Help](#)

Home Real-Time Review Replay Reports Visualizer

My Home Last updated: 09/23/2018 12:39:51 AM

3320 Skill 3320 (s3320)

CALLS WAITING (0)

| IDLE (1) | ACD (1) | NON-ACD (1) | UNAVAILABLE (0) | LOGGED OUT (0) |
|---------------------------|---------------------------|---------------------------|-----------------|----------------|
| 1000 I 0:00:19 Agent 1000 | 1001 A 0:00:28 Agent 1001 | 1002 T 0:03:39 Agent 1002 | | |

Powered by TASKE Technology Inc.

9. Conclusion

These Application Notes describe the configuration steps required for TASKE Contact to successfully interoperate with Avaya Aura® Communication Manager using Avaya Aura® Application Enablement Services. All feature and serviceability test cases were completed with observations if any noted in **Section 2.2**.

10. Additional References

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

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

1. *Administering Avaya Aura® Application Enablement Services*, Release 8.0, July 2018
2. *Avaya Aura® Communication Manager Feature Description and Implementation*, Release 8.0, July 2018
3. *Deploying Avaya Aura® Application Enablement Services in Virtualized Environment*, Release 8.0, July 2018
4. *Administering and Maintaining Avaya Aura® Application Enablement Services*, Release 8.0, July 2018

Contact TASKE Technology Inc. to obtain the following documentation.

1. *TASKE Installation Guide for Avaya Aura® Communication Manager with Aura® Application Enablement Services*.
2. *Administration Guide for TASKE Contact for Avaya Aura® Communication Manager with Aura® Application Enablement Services*.
3. *TASKE Contact Web Portal Report Reference Guide for Avaya Aura® Communication Manager with Aura® Application Enablement Services*.
4. *TASKE Contact Web Portal User Guide for Avaya Aura® Communication Manager with Aura® Application Enablement Services*.

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