AVAYA

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.

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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 TASKE Contact 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 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	56001
Skill Group	56300
Supervisor Telephone	56103
Agent IDs	1001, 1004
Agent Telephone	56104, 56204
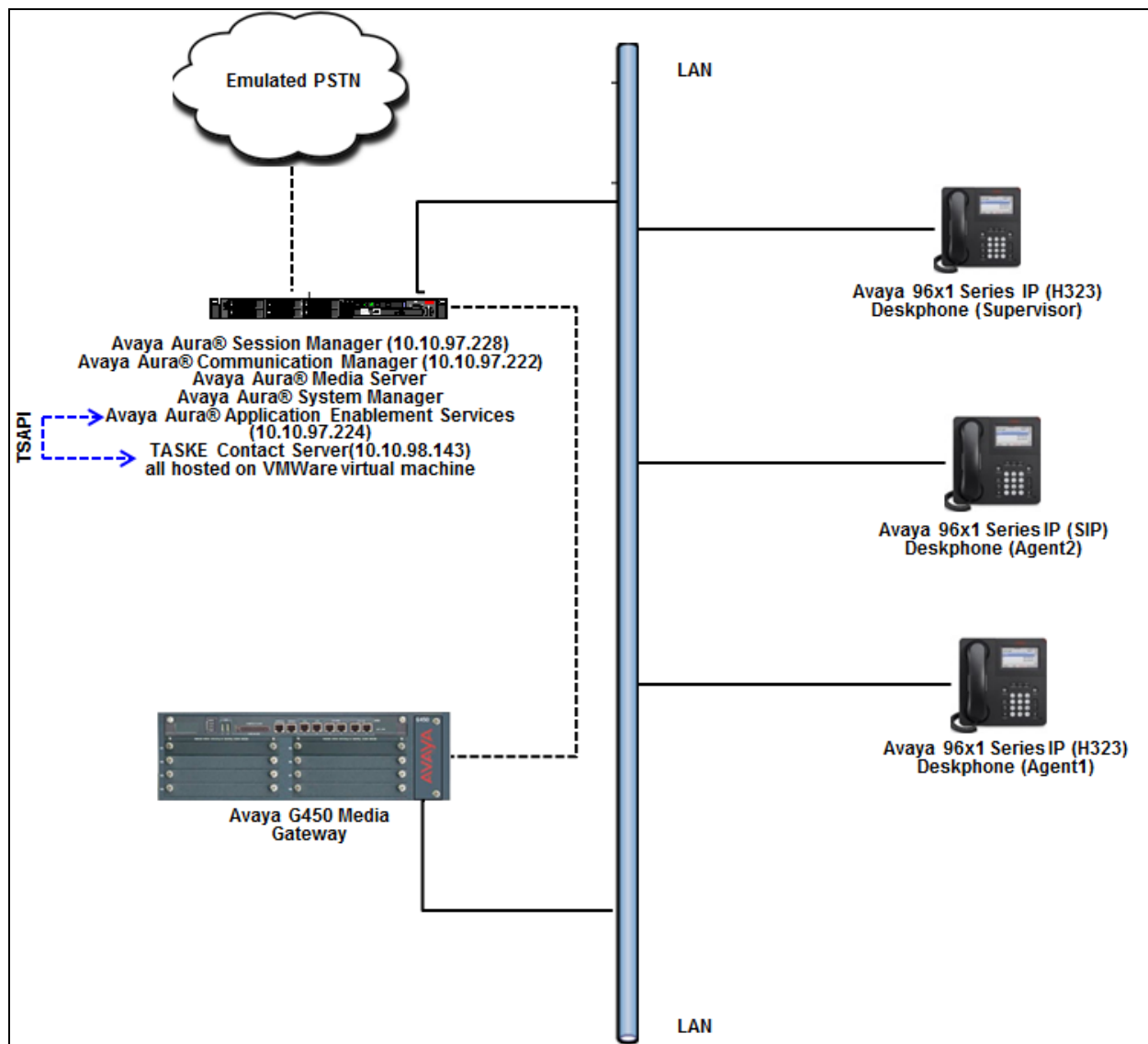
Figure 1: Avaya Network with TASKE Contact Server

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	7.1.0.0.532
Avaya Aura® Application Enablement Services running on virtualized environment	7.1.0.0.0.17-0
Avaya Aura® Session Manager running on virtualized environment	7.1.0.0.710028
Avaya Aura® System Manager	7.1.0.0.1125193
Avaya Aura® Media Server	7.8.0.312
Avaya G450 Media Gateway	38.18.0 /1
Avaya 96x1 Series IP Telephone • 9611G (H.323) • 9641GS (SIP)	 6.6401 7.0.1.2.9
TASKE Contact on Windows 2008 R2 Standard Server with Service Pack 1 • Avaya TSAPI Windows Client	2017 tsapi-client-win32-7.1.0-67.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

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: 56000
     Type: ADJ-IP
                                                                       COR: 1

     Name: DevvmAES
```

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.

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

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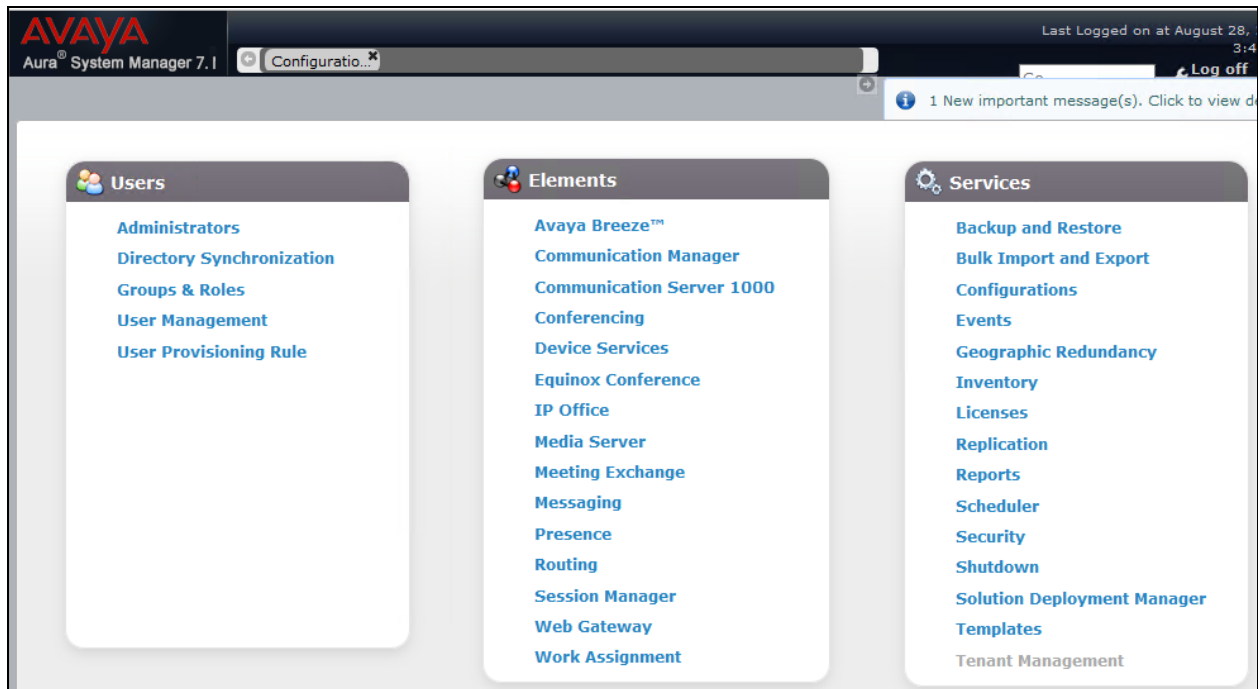
The **Licenses** screen below is displayed next. Select **Licensed Products → APPL_ENAB →
Application_Enablement** in the left pane, to display the **Licensed Features** screen in the right
pane.

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

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

Welcome: User cust
Last login: Fri Aug 25 15:30:14 2017 from
Number of prior failed login attempts: 0
HostName/IP: DevvmAES/1
Server Offer Type:
VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 7.1.0.0.0.17-0
Server Date and Time: Mon Aug 28 15:20:06
EDT 2017
HA Status: Not Configured

AVAYA **Application Enablement Services**

Management Console

Home   **Home | Help | Logout**

- AE Services
- Communication Manager Interface
- High Availability
- Licensing
- Maintenance
- Networking
- Security
- Status
- User Management
- Utilities
- Help

Welcome to OAM

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

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

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

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6.3. 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**.

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

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

6.4. 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 TSAPI Service, JTAPI and Telephony Service**.

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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**.

6.6. 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.

6.7. Obtain Tlink Name

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

In this case, the associated Tlink name is "**AVAYA#DEVVMCM#CSTA#DEVVMAES**". Note the use of the switch connection "devvmcm" from **Section 6.3** as part of the Tlink name.

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.

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.

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 conclusion of the TASKE Contact installation, the TASKE Database Update Wizard is invoked automatically and displays the **Welcome to the TASKE Database Update Wizard** screen shown below.
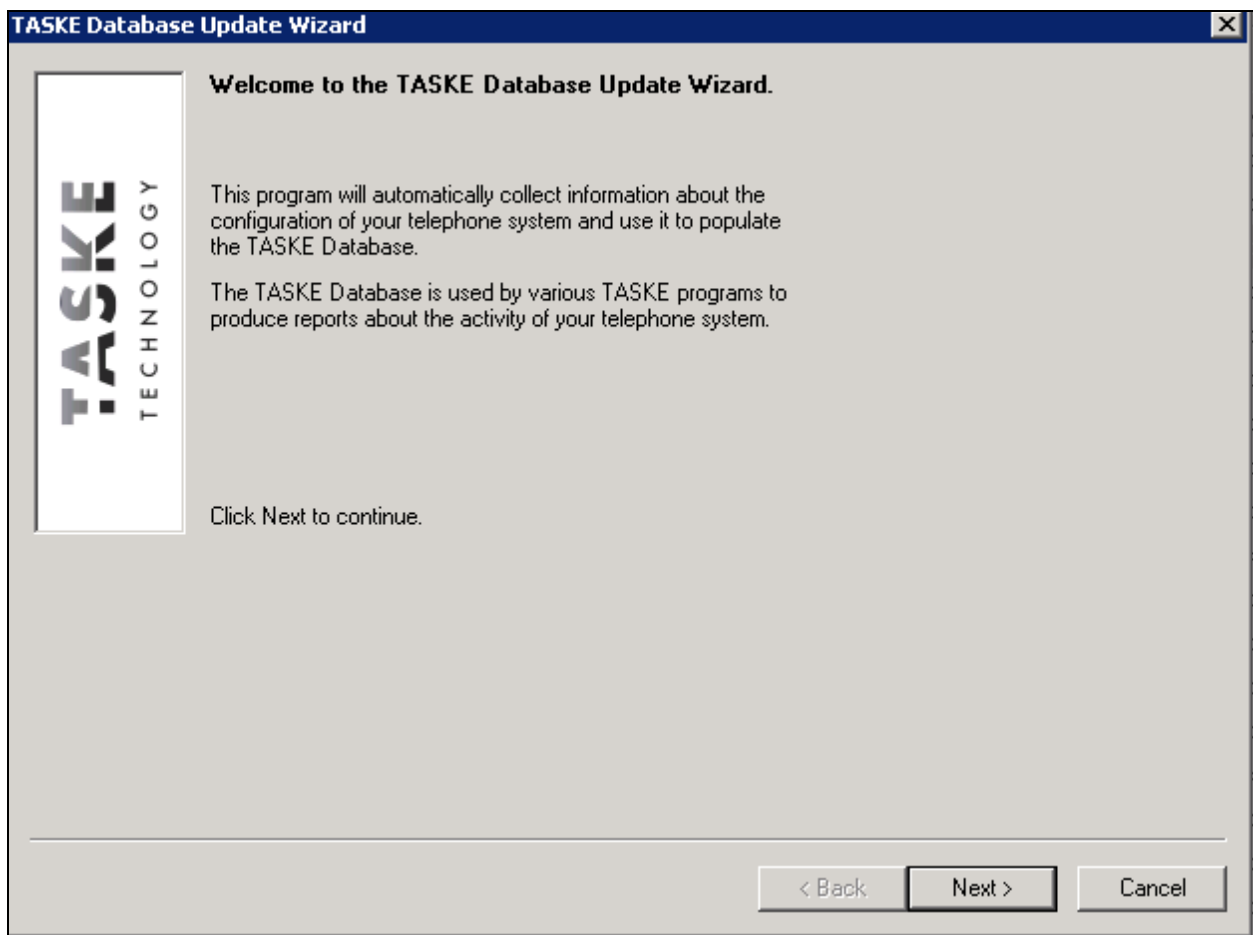
Navigate forward to the **Import Communication Manager Information** screen. If Avaya Site Administration is used to obtain the configured contact center devices from Communication Manager, then the path to where the data files reside can be entered in **Folder**.

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.

7.2. Administer TASKE Collector

After completing the TASKE Database Update Wizard, the **TASKE Collector** screen is displayed. For **Tlink name**, select the Tlink name from **Section 6.7**.

For **User name** and **Password**, enter the TASKE user credentials from **Section 6.8**. Check **Remember password** if desired.

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

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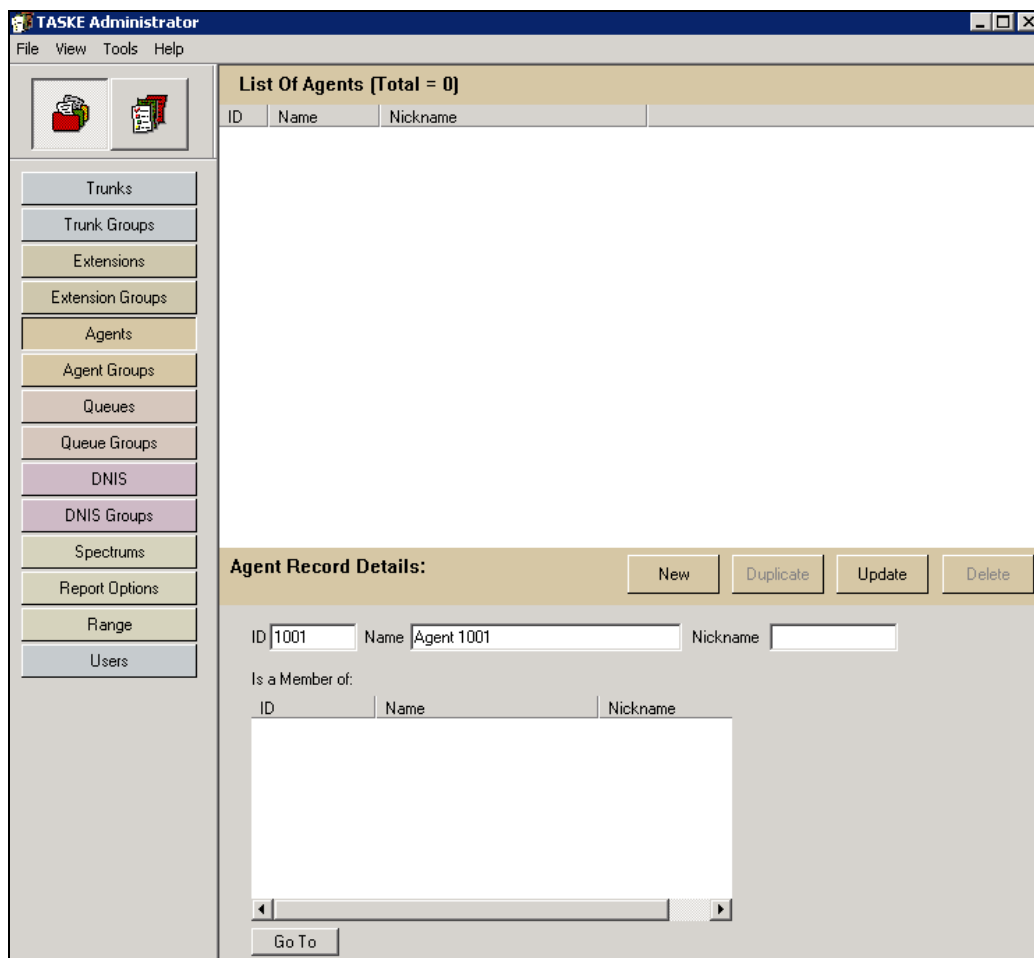
Repeat this procedure for all agent telephone and VDN extensions from **Section 3**. In the compliance testing, three extension records were created as shown below.
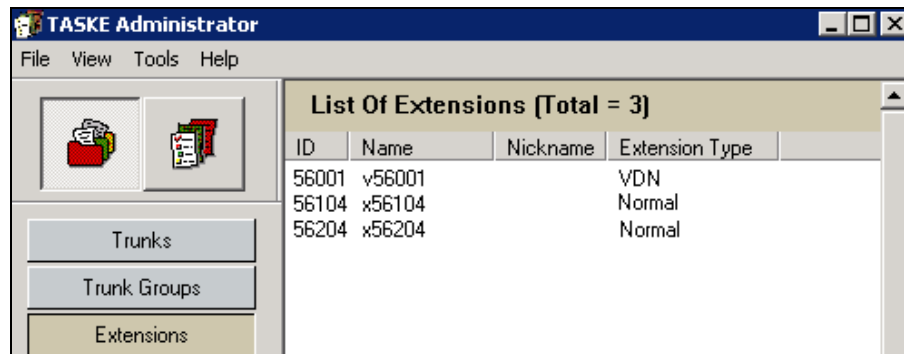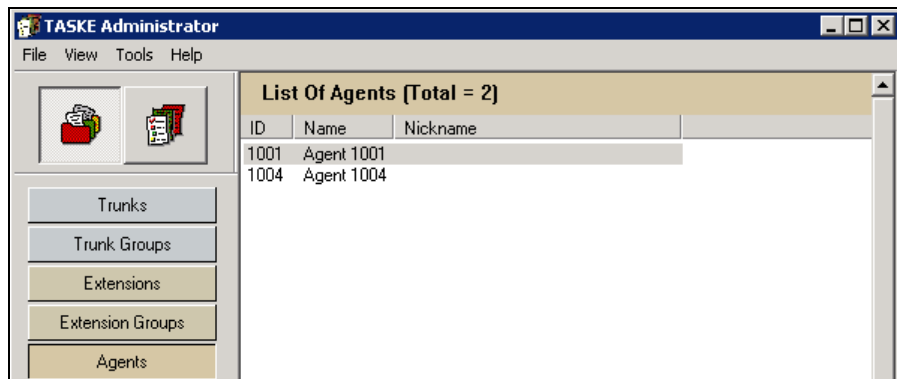

7.4. Administer Agents

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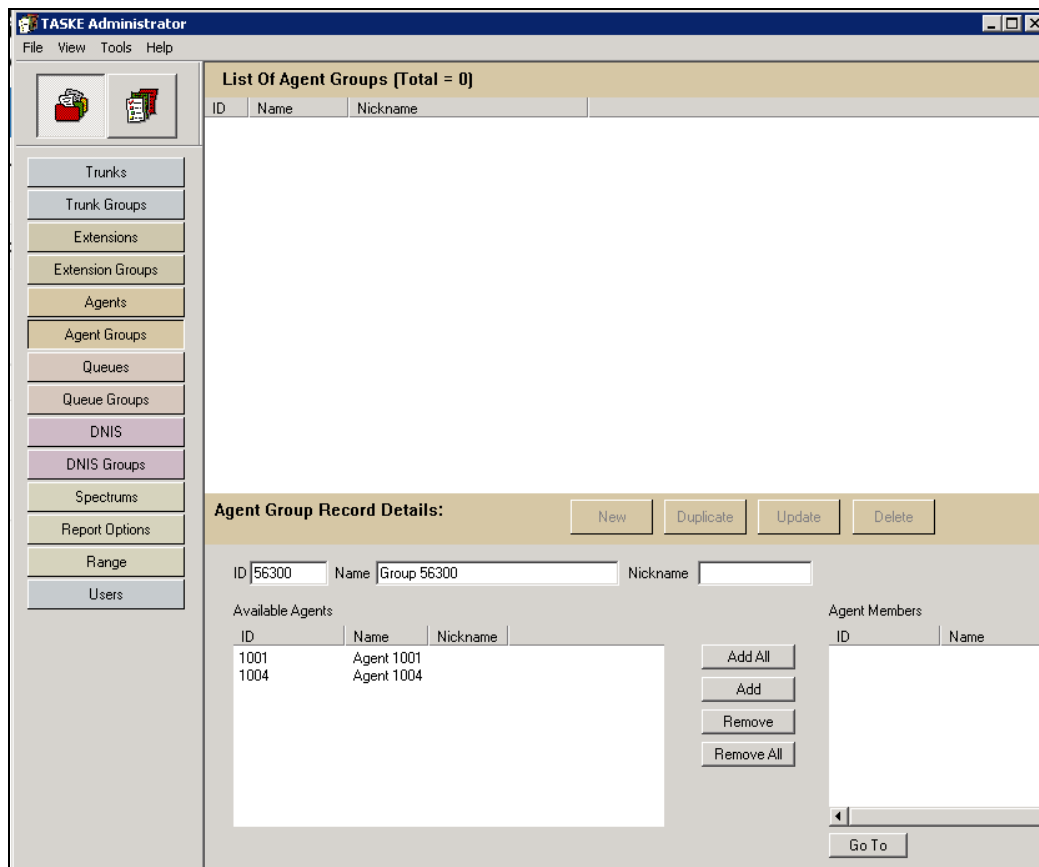
Repeat this procedure for all agent IDs from **Section 3**. In the compliance testing, two agent records were created as shown below.

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.

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.
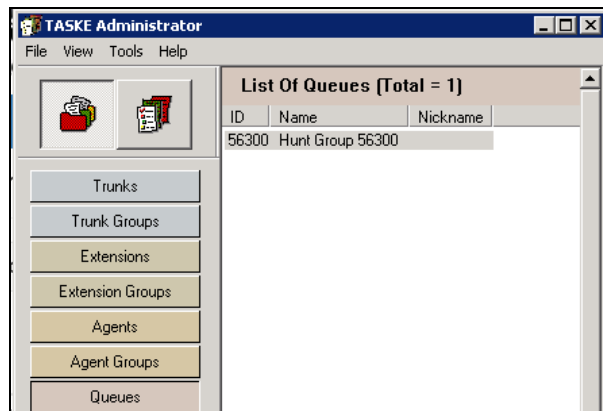
7.7. Administer Supervisors

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.
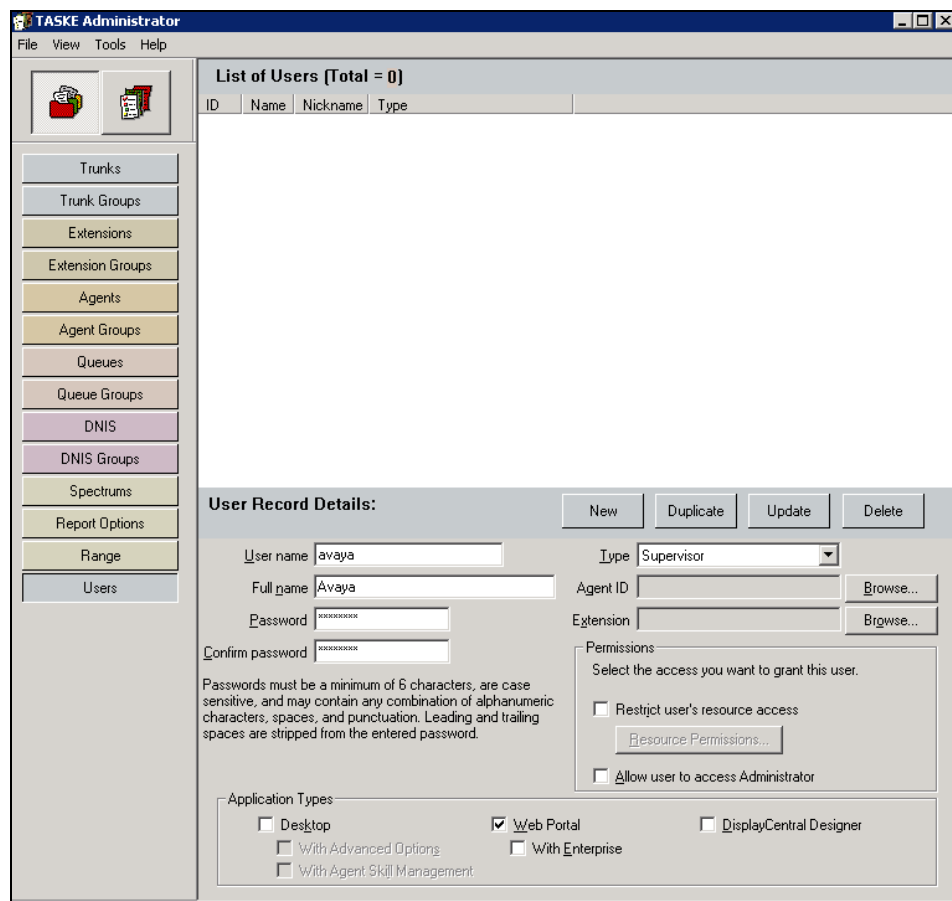
Repeat this procedure for all supervisors from **Section 3**. In the compliance testing, one user record was created.

Select **File → Exit** from the top menu to close the **TASKE Administrator** screen.

7.8. Restart Components

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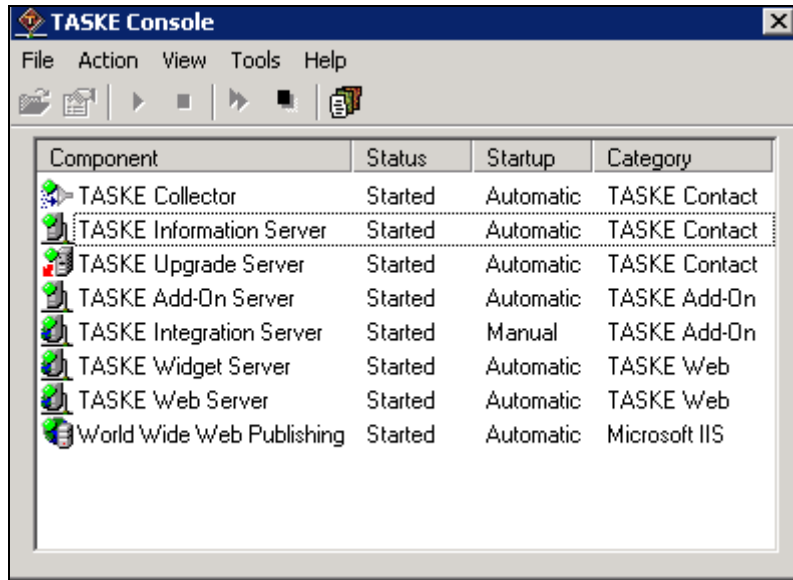Stop All TASKE Servers** from the top menu, followed by **Action → Start All TASKE
Servers**.

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

1       5         no     DevvmAES         established   1083     1083
```

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 6.3**, as shown below.

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 **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.

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® Session Manager*, Release 7.1, Issue 1 May 2017
2. *Deploying Avaya Aura® System Manager*, Release 7.1, Issue 1 May 2017
3. *Administering Avaya Aura® System Manager for Release 7.1*, Release 7.1, Issue 2 May 2017
4. *Avaya Aura® Communication Manager Feature Description and Implementation*, Release 7.1, Issue 1 May 2017
5. *Deploying Avaya Aura® Application Enablement Services in Virtualized Environment*, Release 7.1, Issue 1 May 2017
6. *Administering and Maintaining Avaya Aura® Application Enablement Services*, Release 7.1, Issue 1 May 2017

Product documentation for TASKE Contact may be found at http://www.taske.com/support/documentation.php.

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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