



Avaya Solution & Interoperability Test Lab

Application Notes for OpenMethods Oracle Service Cloud Adapter with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager – Issue 1.0

Abstract

These Application Notes contain instructions for OpenMethods Oracle Service Cloud Adapter with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager to successfully interoperate.

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

This document contains a sample configuration that was used for interoperability compliance testing between OpenMethods Oracle Service Cloud Adapter, Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager.

Note: Oracle bought a company called RightNow several years ago, the Service Cloud offer is based on the RightNow technologies and so the product Oracle Service Cloud may be referred to as RightNow Cloud Service and/or Service Cloud throughout this document.

OpenMethods's Oracle Service Cloud Adapter is a voice and multimedia connector that delivers pre-established bi-directional and real-time integration between Oracle RightNow Technologies and Avaya Aura® environment. The connector is designed to help customers quickly and easily integrate Oracle RightNow Cloud Service and their Avaya Aura® environment.

With the OpenMethods Media bar Add-In, information pertinent to voice calls, email, and chat, is seamlessly shared between Avaya Aura® environment and Oracle RightNow Cloud Service. using automatic screen pop, the OpenMethods Media Bar allows each contact center agent access to a customer's detailed information in the Oracle Service Cloud database.

2. General Test Approach and Test Results

Interoperability testing contained functional tests that tested OpenMethods Oracle Service Cloud Adapter's ability to successfully operate with Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager.

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 Oracle Service Cloud Adapter did not include use of any specific encryption features as requested by Open Methods.

2.1. Interoperability Compliance Testing

During Interoperability Compliance Testing, call center call routing scenarios were tested. Scenarios that were tested are, OpenMethods Oracle Service Cloud Adapter's ability to:

- Monitor agent status
- Route calls to Oracle Service Cloud client
- Handle Voice, Email, and Chat transactions

2.2. Test Results

All planned test cases were passed.

2.3. Support

OpenMethods Technical Support can be reached via email or phone.

E-mail: care@openmethods.com

Phone: +1.816.283.8965 (ext. 1)

Web: www.openmethods.com

3. Reference Configuration

Figure 1 illustrates the configuration that consists of Avaya and OpenMethods components that were used during the compliance testing.

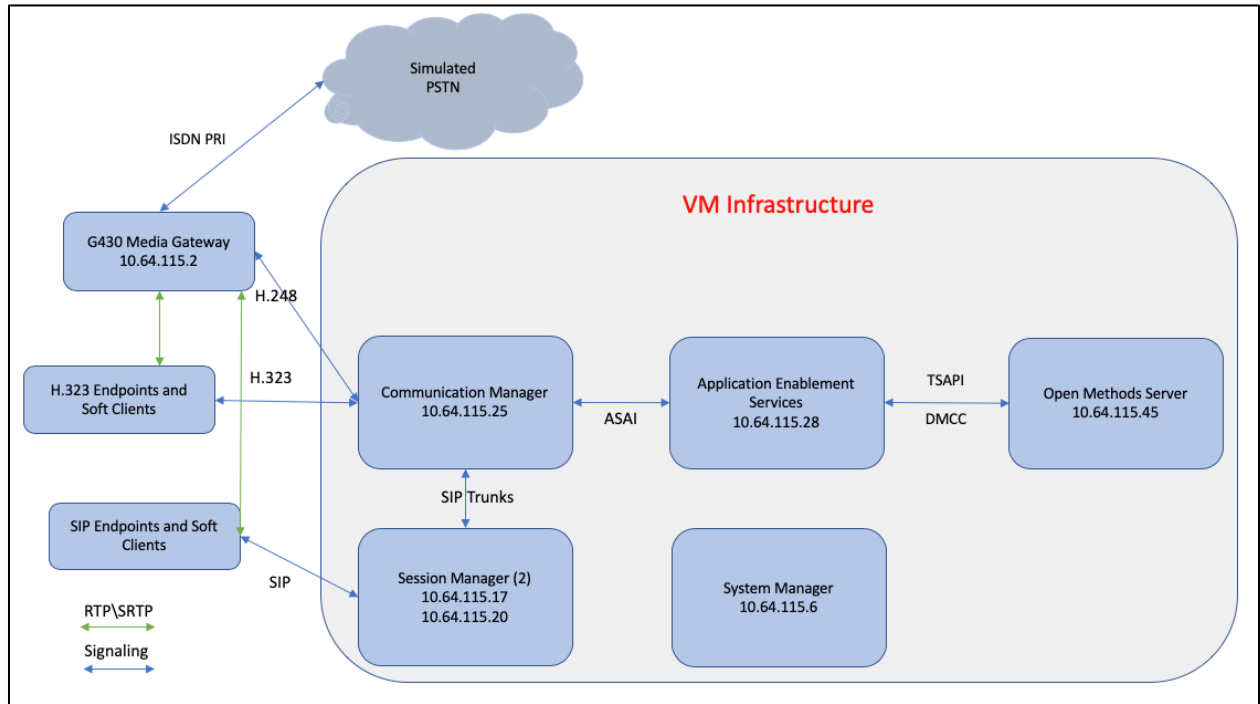


Figure 1: Reference Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager	8.1.0.0.890
Avaya G430 Media Gateway	41.10.0
Avaya Aura® Application Enablement Services	8.1.0.0.0.9-1
Avaya Agent Desktop	2.0
Avaya J169\179 Desk Phones	3.0.0.1.6 (SIP)
Avaya 9641G Desk Phone	7.1.1.0.9 (SIP)
Avaya 9611G Desk Phone	6.6506 (H.323)
Avaya 6408D+ Digital Desk Phone	N/A
OpenMethods Integration Server	5.3
OpenMethods QueueAdapter	5.3
OpenMethods PopFlow	5.3
OpenMethods Harmony Client	5.3
OpenMethods Oracle Service Cloud Client	19B SP4 (September 2019)

5. Configure Avaya Aura® Communication Manager

This section contains steps necessary to configure OpenMethods Oracle Service Cloud Adapter successfully with Avaya Aura® Communication Manager. All configurations in Communication Manager were performed via SAT terminal. For reference, the following call center items were used in the testing:

Stations	Type	Description
30002	9611 H.323	Agent station
30005	6408D+ Digital	Agent Station
30000, 30010	AWOH X Port stations	Chat phantom call stations
30011, 30012	AWOH X Port stations	Email phantom call stations
Call Center Agents	Skills	
32001, 32002	1,5,6	
Vector Directory Numbers	Media	Vector
31500	Voice	1
31505	Chat	5
31506	Email	6
Hunt Groups (Skills)	Extension	Description
1	31000	Voice
5	31005	Chat
6	31006	Email
7	31008	Chat AWOH non-acd group
8	31009	Email AWOH non-acd group

5.1. Verify Feature and License

Enter the **display system-parameters customer-options** command and ensure that the following features are enabled. On Page 4, verify **Computer Telephone Adjunct Links** is set to **y**.

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? y	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. Configure Stations – Call Center

Add stations for call center agents to answer calls. Use **add station *n*** command to add a station, where ***n*** is an available station extension. Configure the station as follows, on Page 1:

- In **Name** field, enter a descriptive name.
- Set **Type** to the type of the telephones.
- Enter a **Security Code**.

add station 30002		Page 1 of 5
STATION		
Extension: 30002	Lock Messages? n	BCC: 0
Type: 9611	Security Code: 123456	TN: 1
Port: S000005	Coverage Path 1: 1	COR: 1
Name: SIL2	Coverage Path 2:	COS: 1
Unicode Name? n	Hunt-to Station:	Tests? y
STATION OPTIONS		
Loss Group: 19	Time of Day Lock Table:	
	Personalized Ringing Pattern: 1	
	Message Lamp Ext: 30002	
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	IP SoftPhone? y	
	IP Video Softphone? n	
	Short/Prefixed Registration Allowed: default	

One Page 4, under **BUTTON ASSIGNMENTS**, add **auto-in**, **after-call**, **release** and **aux-work** as shown below:

add station 30002		Page 4 of 5
STATION		
SITE DATA		
Room:	Headset? n	
Jack:	Speaker? n	
Cable:	Mounting: d	
Floor:	Cord Length: 0	
Building:	Set Color:	
ABBREVIATED DIALING		
List1:	List2:	List3:
BUTTON ASSIGNMENTS		
1: call-appr	5: after-call	Grp:
2: call-appr	6: release	
3: call-appr	7: auto-in	Grp:
4: send-calls Ext:	8: aux-work	RC: Grp:

5.3. Configure Stations – CTI

Add CTI stations that will be used to launch Chat and Email phantom calls. Use **add station *n*** command to add a station, where *n* is an available station extension. Configure the station as follows, on Page 1:

- In **Name** field, enter a descriptive name.
- Set **Type** to **6408D+**.
- Set **Port** to **X**.

add station 30000		Page 1 of 5
STATION		
Extension: 30000	Lock Messages? n	BCC: 0
Type: 6408D+	Security Code: *	TN: 1
Port: X	Coverage Path 1:	COR: 1
Name: AWOH Chat1	Coverage Path 2:	COS: 1
Unicode Name? n	Hunt-to Station:	
STATION OPTIONS		
Loss Group: 2	Time of Day Lock Table:	
Data Module? n	Personalized Ringing Pattern: 1	
Speakerphone: 2-way	Message Lamp Ext: 30000	
Display Language: english	Mute Button Enabled? y	
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	IP SoftPhone? n	
	Remote Office Phone? n	
	IP Video? n	
IP Video? n		

5.4. Configure Hunt Group

Use **add hunt-group *n*** command to add a hunt group, where *n* is an available hunt group. On Page 1:

- In the **Group Name** field, enter a descriptive name.
- Set **ACD**, **Queue**, **Vector** to **y**.
- Enter an available **Group Extension**.

add hunt-group 1		Page 1 of 4
HUNT GROUP		
Group Number: 1	ACD? y	
Group Name: Voice	Queue? y	
Group Extension: 31000	Vector? y	
Group Type: ead-mia		
TN: 1		
COR: 1	MM Early Answer? n	
Security Code:	Local Agent Preference? n	
ISDN/SIP Caller Display:		
Queue Limit: unlimited		
Calls Warning Threshold:	Port:	
Time Warning Threshold:	Port:	

On Page 2, set **Skill** to **y** and **Measured** to **both**. Set **Multiple Call Handling** to either **one-per-skill** or **many-forced** to enable agents to handle more than one transaction at a time.

add hunt-group 1		Page 2 of 4	
HUNT GROUP			
Skill? y		Expected Call Handling Time (sec): 180	
AAS? n			
Measured: both			
Supervisor Extension:			
Controlling Adjunct: none			
Multiple Call Handling: one-per-skill			
Timed ACW Interval (sec):		After Xfer or Held Call Drops? n	

Note: During compliance testing, 3 hunt groups were created to route email, chat and voice to agents.

In addition, two non-acd groups were created for Chat and Email AWOH stations, to launch calls to the Chat and Email VDNs. These were administered with **ACD, Queue, and Vector** set to **n**, and the AWOH stations were assigned to the respective group. The email group setup was similar to the chat group shown below.

add hunt-group		Page 1 of 4	
HUNT GROUP			
Group Number: 7		ACD? n	
Group Name: Chat		Queue? n	
Group Extension: 31008		Vector? n	
Group Type: ead-mia			
TN: 1			
COR: 1			
Security Code:		MM Early Answer? n	
ISDN/SIP Caller Display:		Local Agent Preference? n	
Queue Limit: unlimited			
Calls Warning Threshold:		Port:	
Time Warning Threshold:		Port:	

```

add hunt-group 7
                                     Page 3 of 60

                                HUNT GROUP
  Group Number: 7      Group Extension: 31008      Group Type: ucd-mia
  Member Range Allowed: 1 - 1500      Administered Members (min/max): 1 /2
                                     Total Administered Members: 2

GROUP MEMBER ASSIGNMENTS
  Ext      Name(16 characters)      Ext      Name(16 characters)
  1: 30000      AWOH Chat1      14:
  2: 30010      AWOH Chat2      15:

```

5.5. Configure Agents – Call Center

Use **add agent-loginID *n*** to add an agent that will be used by call center agents to log in, where *n* is an available agent id. On Page 1:

- In the **Name** field, type in a descriptive name
- Enter a **Password** and **Password (enter again)**
- Ensure **Auto Answer** is either **acd** or **all**

```

add agent-loginID 32000
                                     Page 1 of 2

                                AGENT LOGINID

  Login ID: 32000      Unicode Name? n      AAS? n
    Name: SIL Test1      AUDIX? n
    TN: 1      Check skill TNS to match agent TN? n
    COR: 1
  Coverage Path:      LWC Reception: spe
  Security Code:      LWC Log External Calls? n
  Attribute:      AUDIX Name for Messaging:

                                LoginID for ISDN/SIP Display? n
                                Password: 123456
                                Password (enter again): 123456
                                Auto Answer: all

  AUX Agent Remains in LOA Queue: system      MIA Across Skills: system
  AUX Agent Considered Idle (MIA): system      ACW Agent Considered Idle: system
    Work Mode on Login: system      Aux Work Reason Code Type: system
                                Logout Reason Code Type: system
                                Maximum time agent in ACW before logout (sec): system
                                Forced Agent Logout Time: :
  WARNING: Agent must log in again before changes take effect      WARNING:
  Agent must log in again before changes take effect

```

On Page 2, set skill number and skill level in **SN** and **SL** fields. Skill number is the hunt group that was added in previous section.

```

add agent-loginID 32000
                                     Page 2 of 2

                                AGENT LOGINID

  Direct Agent Skill: 1      Service Objective? n
  Call Handling Preference: skill-level      Local Call Preference? n

  SN      RL SL      SN      RL SL
  1: 1      1      16:
  2: 5      1      17:
  3: 6      1      18:

```

5.6. Configure Vectors

Use **change vector *n*** to configure a Vector, where *n* is an available Vector number. These are the steps to route Voice, Email, and Chat transactions to agents.

Configure a simple vector to queue the call as follows:

change vector 1		Page 1 of 6
CALL VECTOR		
Number: 1 Name: SIL Test		
Multimedia? n	Attendant Vectoring? n	Meet-me Conf? n Lock? n
Basic? y	EAS? y G3V4 Enhanced? y	ANI/II-Digits? y ASAI Routing? y
Prompting? y	LAI? y G3V4 Adv Route? y	CINFO? y BSR? y Holidays? y
Variables? y	3.0 Enhanced? y	
01 wait-time	0 secs hearing ringback	
02 queue-to	skill 1 pri m	
03 goto step	1 if unconditionally	
04		

Repeat this for Chat and Email.

5.7. Configure Vector Directory Number (VDN)

Use **add vdn *n*** to add a vdn, where *n* is an available vdn extension. On Page 1:

- In the **Name** field, enter a descriptive name.
- In the **Destination** field, set **Vector Number** to the vector configured earlier in this document. i.e., Vector Number 1. Set the **1st Skill** to the Voice skill, **1**.

add vdn 31500		Page 1 of 3
VECTOR DIRECTORY NUMBER		
Extension: 31500		Unicode Name? n
Name*: Voice		
Destination: Vector Number		1
Attendant Vectoring? n		
Meet-me Conferencing? n		
Allow VDN Override? y		
COR: 1		
TN*: 1		
Measured: none		Report Adjunct Calls as ACD*? n
VDN of Origin Annc. Extension*:		
1st Skill*: 1		
2nd Skill*:		
3rd Skill*:		
SIP URI:		

Note: During compliance test 3 different VDNs were created to test a Voice, Email and Chat calls.

5.8. Configure AES connection

Use **change ip-services** command to add an entry for AES. On Page 1,

- In the **Service Type** field, type **AESVCS**.
- In the **Enabled** field, type **y**.
- In the **Local Node** field, type the Node name **procr** for the Processor Ethernet Interface.
- In the **Local Port** field, use the default of **8765**.

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

On Page 4 of the IP Services form, enter the following values:

- In the **AE Services Server** field, type the name obtained from the Application Enablement Services server.
- In the **Password** field, type a password to be administered on the Application Enablement Services server.
- In the **Enabled** field, type **y**.

change ip-services			Page 3 of 3		
AE Services Administration					
Server ID	AE Services Server	Password	Enabled	Status	
1:	sildvaes8	*	y	in use	10:

5.9. Add CTI Link

Use **add cti-link *n*** command, where ***n*** is an available CTI link number.

- In the **Extension** field, type **<station extension>**, where **<station extension>** is a valid station extension.
- In the **Type** field, type **ADJ-IP**.
- In the **Name** field, type a descriptive name.

add cti-link 1		Page 1 of 3	
CTI LINK			
CTI Link: 1			
Extension: 30099			
Type: ADJ-IP			
COR: 1			
Name: AES8			
Unicode Name? n			

6. Configure Avaya Aura® Application Enablement Services

Configuration of Avaya Aura® Application Enablement Services requires a user account be configured for OpenMethods. All administration is performed by web browser, <https://<aes-ip-address>/>

6.1. Configure User

A user was created for OpenMethods to communicate with AES. Navigate to **User Management** → **User Admin** → **Add User**.

Fill in **User Id**, **Common Name**, **Surname**, **User Password** and **Confirm Password**. Set the **CT User** to **Yes** and click **Apply** at the bottom of the screen (not shown).

The screenshot displays the Avaya Aura User Management web interface. The top navigation bar is red with the text "User Management | User Admin | List All Users" on the left and "Home | Help | Logout" on the right. A left-hand sidebar contains a tree view of navigation options: AE Services, Communication Manager Interface, High Availability, Licensing, Maintenance, Networking, Security, Status, User Management (expanded), Service Admin, User Admin (expanded), Add User, Change User Password, List All Users (highlighted), Modify Default Users, Search Users, Utilities, and Help. The main content area is titled "Edit User" and contains a form with the following fields: * User Id (text box with "OMethod"), * Common Name (text box with "Open"), * Surname (text box with "Methods"), User Password (text box), Confirm Password (text box), Admin Note (text box), Avaya Role (dropdown menu with "None" selected), Business Category (text box), Car License (text box), CM Home (text box), Csm Home (text box), CT User (dropdown menu with "Yes" selected), Department Number (text box), Display Name (text box), Employee Number (text box), and Employee Type (text box).

Navigate to **Security** → **Security Database** → **CTI Users** → **List All Users**. Select the recently added user and click **Edit**. Check the box for **Unrestricted Access** and click **Apply Changes**.

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

Edit CTI User

User Profile: User ID
 Common Name
 Worktop Name
 Unrestricted Access ☒

OMethod
 Open
 NONE ▼

Call and Device Control: Call Origination/Termination and Device Status
 Any ▼

Call and Device Monitoring: Device Monitoring
 Calls On A Device Monitoring
 Call Monitoring ☒

Any ▼
 Any ▼

Routing Control: Allow Routing on Listed Devices
 Any ▼

Apply Changes Cancel Changes

6.2. Configure Communication Manager Switch Connections

To add links to the Communication Manager, navigate to the **Communication Manager Interface** → **Switch Connections** page and enter a name for the new switch connection and click the **Add Connection** button. This was previously configured as **SILDVCM8** for this test environment:

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"/> SILDVCM8	Yes	30	1

Edit Connection Edit PE/CLAN IPs Edit H.323 Gatekeeper Delete Connection Survivability Hierarchy

Use the **Edit Connection** button shown above to configure the connection. Enter the **Switch Password** and check the **Processor Ethernet** box if using the **procr** interface, as shown below. This must match the password configured when adding AESVCS connection in Communication Manager, in **Section 5.8**.

The screenshot shows the 'Communication Manager Interface | Switch Connections' page. The left sidebar contains a navigation menu with options: AE Services, Communication Manager Interface (selected), Switch Connections (selected), Dial Plan, High Availability, Licensing, Maintenance, Networking, Security, Status, User Management, Utilities, and Help. The main content area is titled 'Connection Details - SILDVCM8' and contains the following fields and controls:

- Switch Password: [Text Input Field]
- Confirm Switch Password: [Text Input Field]
- Msg Period: 30 Minutes (1 - 72)
- Provide AE Services certificate to switch: ☐
- Secure H323 Connection: ☐
- Processor Ethernet: ☒
- Buttons: Apply, Cancel

Use the **Edit PE/CLAN IPs** button (shown in this section's first screen shot above) to configure the **procr** or **CLAN IP Address** (es).

The screenshot shows the 'Communication Manager Interface | Switch Connections' page with the 'Edit Processor Ethernet IP - SILDVCM8' sub-page. The left sidebar is identical to the previous screenshot. The main content area includes:

- A text input field containing '10.64.115.25' and a button labeled 'Add/Edit Name or IP'.
- A table with the following structure:

Name or IP Address	Status
10.64.115.25	In Use

- A 'Back' button located below the table.

6.3. Configure TSAPI Link

Navigate to the **AE Services → TSAPI → TSAPI Links** page to add the TSAPI CTI Link. Click **Add Link** (not shown).

Select a **Switch Connection** using the drop down menu. Select the **Switch CTI Link Number** using the drop down menu. The **Switch CTI Link Number** must match the number configured in the **cti-link** form for Communication Manager, in **Section 5.9**.

If the application will use Encrypted Links, select **Encrypted** in the **Security** selection box.

Click **Apply Changes**. The configuration shown below was previously configured.

The screenshot shows the 'Edit TSAPI Links' configuration page. The left sidebar contains a navigation menu with 'AE Services' expanded, showing 'CVLAN', 'DLG', 'DMCC', 'SMS', 'TSAPI' (selected), 'TWS', 'Communication Manager Interface', 'High Availability', 'Licensing', 'Maintenance', and 'Networking'. Under 'TSAPI', 'TSAPI Links' is selected. The main content area is titled 'Edit TSAPI Links' and contains the following fields: 'Link' (value: 1), 'Switch Connection' (dropdown: SILDVCM8), 'Switch CTI Link Number' (dropdown: 1), 'ASAI Link Version' (dropdown: 9), and 'Security' (dropdown: Both). At the bottom are three buttons: 'Apply Changes', 'Cancel Changes', and 'Advanced Settings'.

Select **Advanced Settings** and note the Tlinks Configured, it will be used when configuring OpenMethods server.

The screenshot shows the 'TSAPI Link - Advanced Settings' configuration page. The left sidebar is identical to the previous screenshot. The main content area is titled 'TSAPI Link - Advanced Settings' and contains the following fields: 'Tlinks Configured' (two text boxes, both containing 'AVAYA#SILDVCM8#CSTA-S#SILDVAES8'), 'Max Flow Allowed' (text box: 2000), 'TSDI Size' (text box: 5242880), and 'TSDI High Water Mark' (text box: 80) followed by '% of TSDI Size'. At the bottom are three buttons: 'Apply Changes', 'Cancel Changes', and 'Restore Defaults'.

7. Configure OpenMethods Oracle Service Cloud Adapter

There are multiple OpenMethods components used in the integration with the Avaya solution.

- **Harmony Client Add-In**– An Add-In into Oracle Service Cloud. Provides a GUI toolbar for call control functionality.
- **PopFlow Add-In** – An Add-In into Oracle Service Cloud. Provides ScreenPop workflow editor, and ScreenPop execution engine components.
- **Harmony Configuration Server** –DB and Service that allows the Harmony Media Bar to obtain configuration information to log into Avaya.
- **Harmony Integration Server** – Service that provides CTI connectivity to Avaya and communicates back to Harmony Client Add-In.
- **Harmony Queue Adapter** - Services that communicates with Oracle Service Cloud to detect new Chat and Email requests, and then submits these requests back to Avaya for routing to agents.

7.1. Harmony Client Add-In

Harmony Client settings are configured with the Harmony Client Configuration Report in the Oracle Service Cloud. This is something the integrator would setup in advance for the entire site.

Once the report is configured and the Harmony Client Add-In is installed into Oracle Service Cloud, the agent can log into Oracle Service Cloud and the Add-In will automatically download (Agent must be in an Oracle Profile that contains a connection to Harmony Media Bar). Once logged into Oracle Service Cloud, the agent can log into the Harmony Media Bar, using the information in the report to connect properly.

The screenshot shows the Oracle Service Cloud interface for configuring the Harmony Client Add-In. The main window is titled "HarmonyConfiguration:1" and displays a form with various configuration fields. On the left, there is a sidebar with "Recent Items" and "Navigation" sections. The "Recent Items" section shows "HarmonyConfigurator" under "Today" and "Older" categories. The "Navigation" section lists "Logs", "Process Designer", "Incident Thread Mask", "Internationalization", "Service", "Sales", "Opportunity Tracking", "Outreach", and "Database". The main form fields include:

- ID: 1
- Profiles: (empty)
- Users: (empty)
- App Manager Url: (empty)
- Customer Id*: 8b0a63e7379041c386bdbdd0709a432
- Crm Instance Id*: 66eeba1d5e6844909892d50372216588
- Config Server Url*: http://10.64.115.45:9088
- Config Server Admin Url*: http://10.64.115.45/admin/v1
- Enable Chat*: Yes
- QueueAdapter Url: http://10.64.115.45:5000
- Log File Directory: (empty)
- Log Level: (empty)
- Log File Size: 10
- Log File Count: 10
- Enable HIPAA: No
- Created By: anup1 anup1
- Date Created: 08/08/2019 05:59 AM
- Updated By: Craig Klepper
- Date Last Updated: 10/04/2019 11:50 AM

The bottom status bar indicates "Logged in as: Craig Klepper | 100%".

7.1.1. Harmony Client - Agent Settings

For compliance testing, two users were created using the Configuration Server WebGUI application to interact with the Open Methods database.

Below is the setup for an Oracle Service Cloud User “agent_1”, repeat for additional agents. Normally, the “Agents Available to this User” would only associate one ACD Agent ID rather than both as shown below.

Customers

DevConnect

Environments

Avaya

32001

32002

CRM Instances

isv_19b_openmethods

agent_1

agent_2

Network Pods

HIS Pod

Harmony

Parent: isv_19b_openmethods

CRM Id:

Username: agent_1

Full Name: Agent 1

Popflow Settings

Override	Setting Name	Value
<input type="checkbox"/>	Screen Pop Type	OnRing

Save

Agents available to this User

Search Agents...

☐ Inherit
 ☒ Override

☒ Avaya

☒ 32001

☒ 32002

Save

Customers

DevConnect

Environments

Avaya

32001

32002

CRM Instances

isv_19b_openmethods

agent_1

agent_2

Network Pods

HIS Pod

Harmony

Native Id:

Name: isv_19b_openmethods

Type: ServiceCloud

Version: 1702

Popflow Settings

Override	Setting Name	Value
<input checked="" type="checkbox"/>	Screen Pop Type	On Ring

+ Service Cloud Connectivity Settings

+ CRM Feature Settings

Save

Children

Id	Name	Actions
08ce7bb66d...	agent_1	<div>Edit</div> <div>Delete</div>
311051f846d8...	agent_2	<div>Edit</div> <div>Delete</div>

1

of 1

1 - 2 of 2 items

IMPORT USERS

Add User Group

Add User

Agents available to all users in this instance

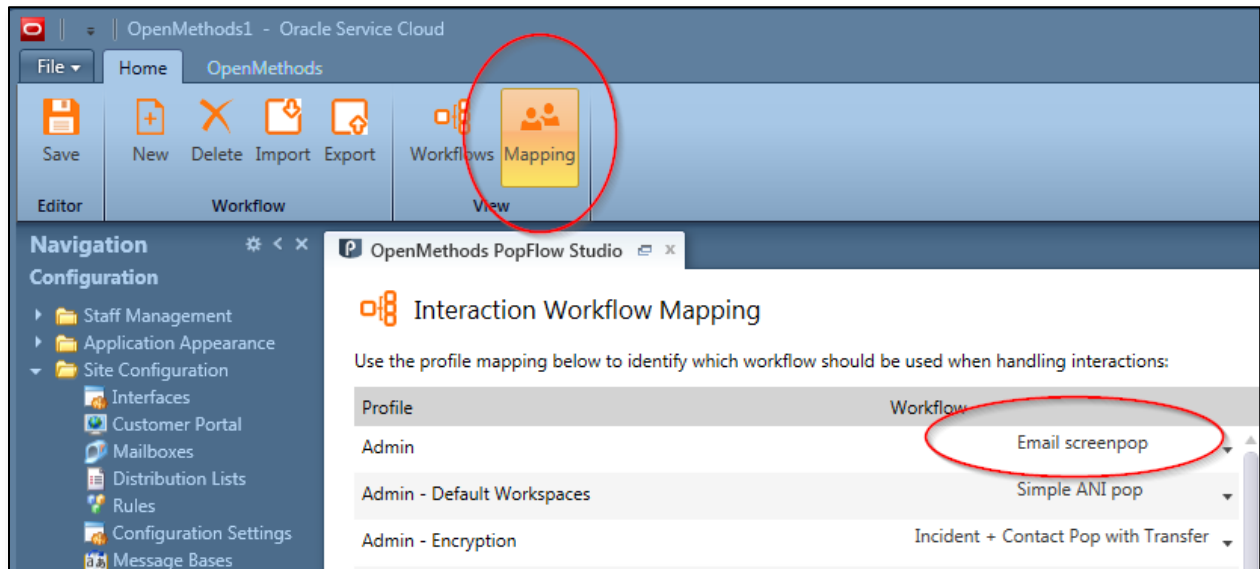
☐ Avaya

Save

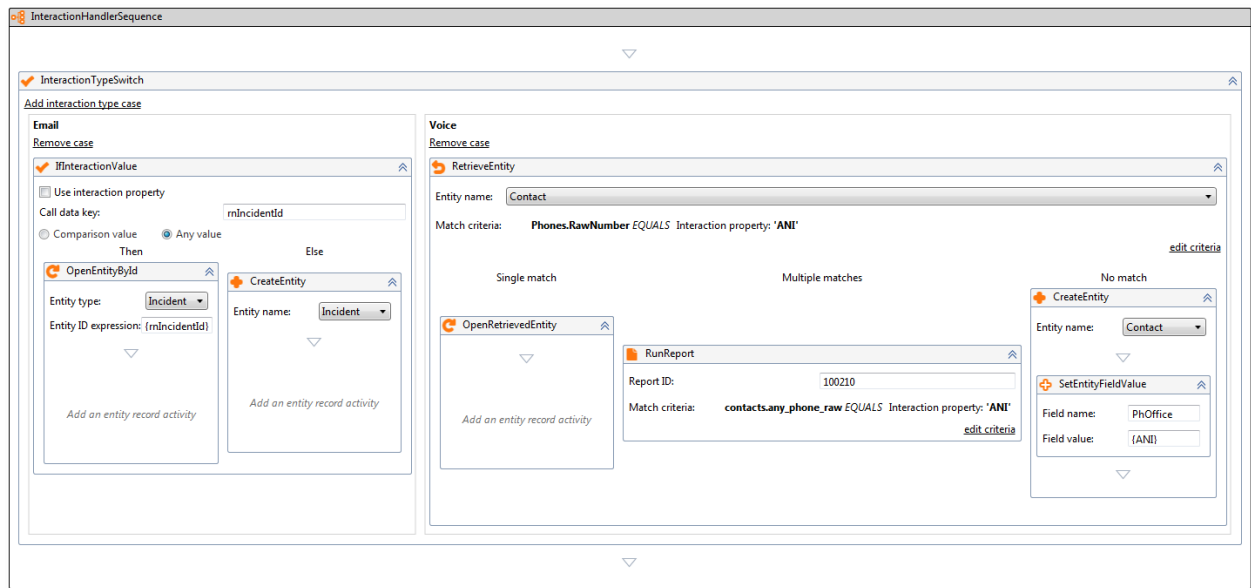
7.1.2. Harmony PopFlow

Harmony PopFlow is configured via OpenMethods Harmony PopFlow Editor when multimedia (Email and Chat) are used along with Voice. It is located in the administrative Oracle Service Cloud interface.

A screenpop script mapping needs to be configured for the Oracle Service Cloud. For this certification, we used the Admin profile and the “emailscreenpop” PopFlow script. Here is the popflow script binding.




The “emailscreenpop” script configuration is below.



7.2. Queue Adapter

Below is the master configuration for the Queue Adapter.


openmethods

We Enable **True** Omnichannel Experience

- Queue Adapter
 - Access
 - Oracle Service Cloud
 - Site Interface(s)

isv_19b_openmethods
 - Third Party Queue(s)

Third Party Queue
 - Inbound
 - Chat
 - OSC Chat Processor(s)

OSC Chat Processor
 - Email
 - OSC Email Processor(s)

OSC Email Processor
 - Routing
 - Outbound
 - Processors
 - Avaya Processor(s)

Avaya Processor
 - Custom Processor(s)
 - Five9 Processor(s)
 - Genesys Processor(s)
 - I3 Processor(s)
 - PureCloud Processor(s)
 - Siemens Processor(s)
 - Tester Processor(s)
 - System
 - Access
 - Agent Manager(s)

Agent Manager
 - Management Server(s)

Avaya Processor

Service

Settings

Server

IP Address To Server	10.64.115.28
IP Port To Server	4721
Login Name	OMethod
Login Password	••••••••
Protocol Version	PROTOCOL_VERSION_6_3_3
Use Secure Sockets	<input type="checkbox"/>
Enable Auto Keep Alive	<input checked="" type="checkbox"/>
Allow Certificate Name Mismatch	<input type="checkbox"/>
UII Delimiter	&
Avaya Switch Name	SILDVCM8
Make Call Timeout	60000
Make Call Response Delay	500

Session

Session Name	OpenMethods-Avaya
Session Cleanup Delay	60
Session Duration	180

Queue

Queue To VDN Mapping	OMDefaultRoute=31005&Default Chat Queue=31005&Tier 1=31006
----------------------	--

Chat

Email

IP Address To Server

IP Address of Avaya AES server.

Chat	
AWOH Hunt Group Ext Chat	31008
Capacity Retry Delay Chat	10000

Email	
AWOH Hunt Group Ext Email	31009
Capacity Retry Delay Email	30000

7.2.1. Reason Codes

Using the Configuration Server WebGUI, configure reason codes which will appear in the Agent toolbar. Note that this solution relies on agents using Auto-in, and initially will log agents in to aux state. For consistent call center reporting, AUX and ACW codes are mapped to labels in the following interface:

The screenshot shows the Configuration Server WebGUI interface. On the left is a navigation menu with categories like Customers, DevConnect, Environments, Avaya, CRM Instances, Network Pods, and Harmony. The main area displays the 'Agent Channel Settings' for 'Agent 1'. Below this is a table of settings with columns 'Override', 'Setting Name', and 'Value'. The 'Name' setting is checked and set to '30005'. Below the settings is a 'Reason Codes' tab with a table of codes.

Override	Setting Name	Value
<input type="checkbox"/>	Client Side Auto Answer Calls	False
<input type="checkbox"/>	Client Side Auto Answer Emails	False
<input type="checkbox"/>	Client Side Auto Answer Chats	False
<input type="checkbox"/>	End Completes Interaction	False
<input checked="" type="checkbox"/>	Name	30005
<input type="checkbox"/>	Chat	True
<input type="checkbox"/>	Email	True
<input type="checkbox"/>	Callbacks	False
<input type="checkbox"/>	Voicemail	False

Id	Code	Name(en_US)	Visibility
d9445551d1fc...	ACW	ACW	Inherit Visible from Avaya
84802b184a6...	0	AUX	Inherit Visible from Avaya

Reason Codes			
Logout Reason			
Interaction Dispositions			
Caller Id			
Quick Dial			
Id	Code	Name(en_US)	Visibility
d9445551d1fc...	ACW	ACW	Inherit Visible from Avaya
84802b184a6...	0	AUX	Inherit Visible from Avaya
457c2ceeeea...	1	Lunch	Inherit Visible from Avaya

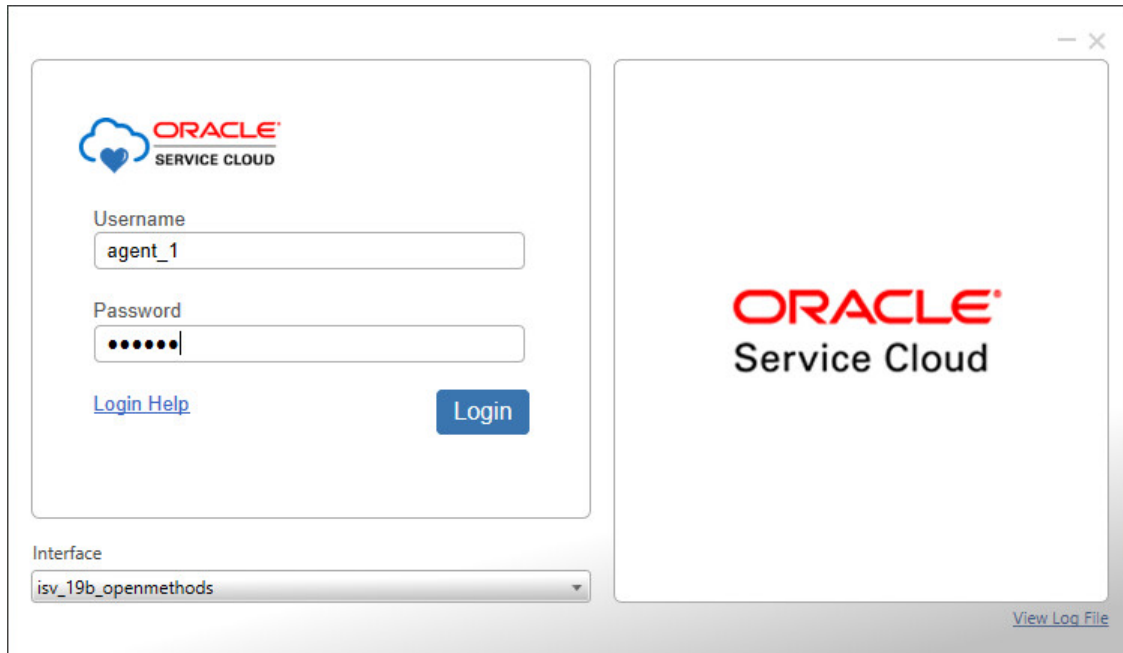
Page 1 of 1

1 - 3 of 3 items

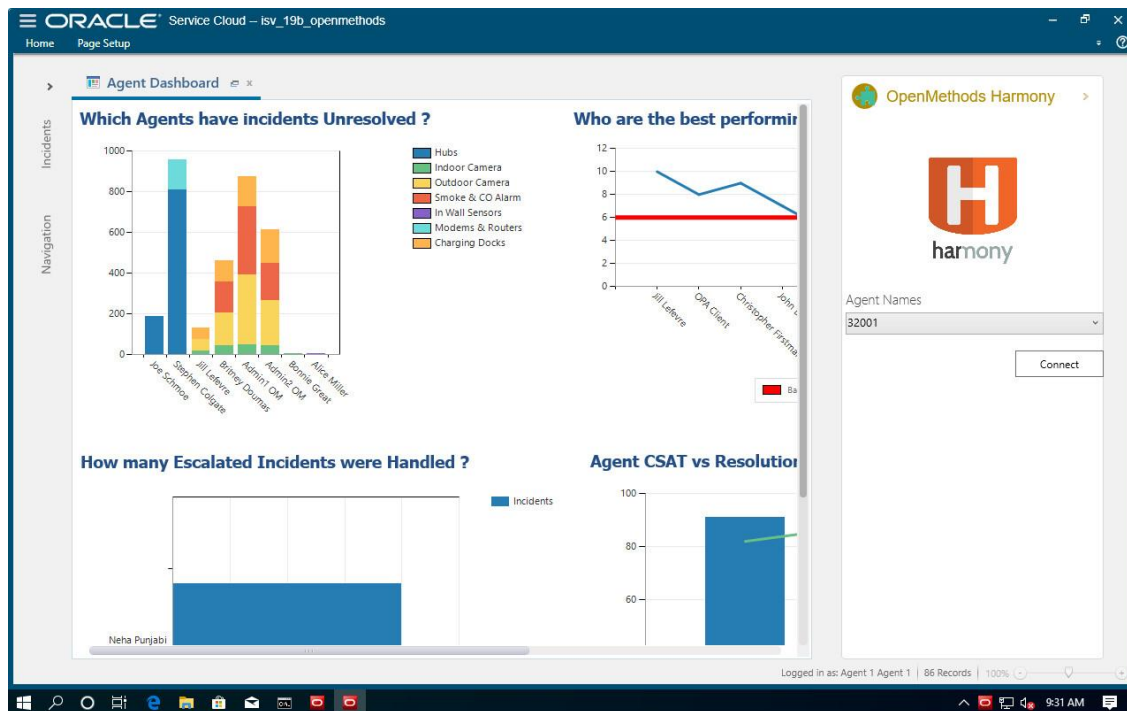
Save

8. Verification Steps

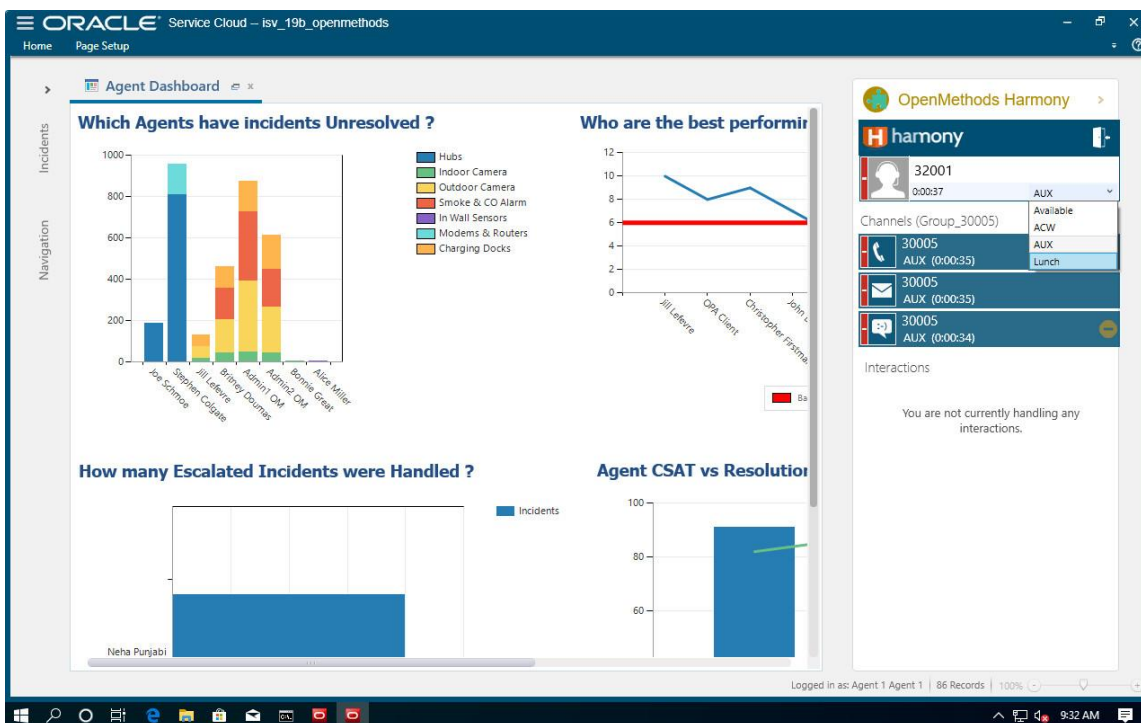
To verify that agent can successfully log in, from one of the Agent Desktops, launch the ServiceCloud client. Log in using appropriate credentials.



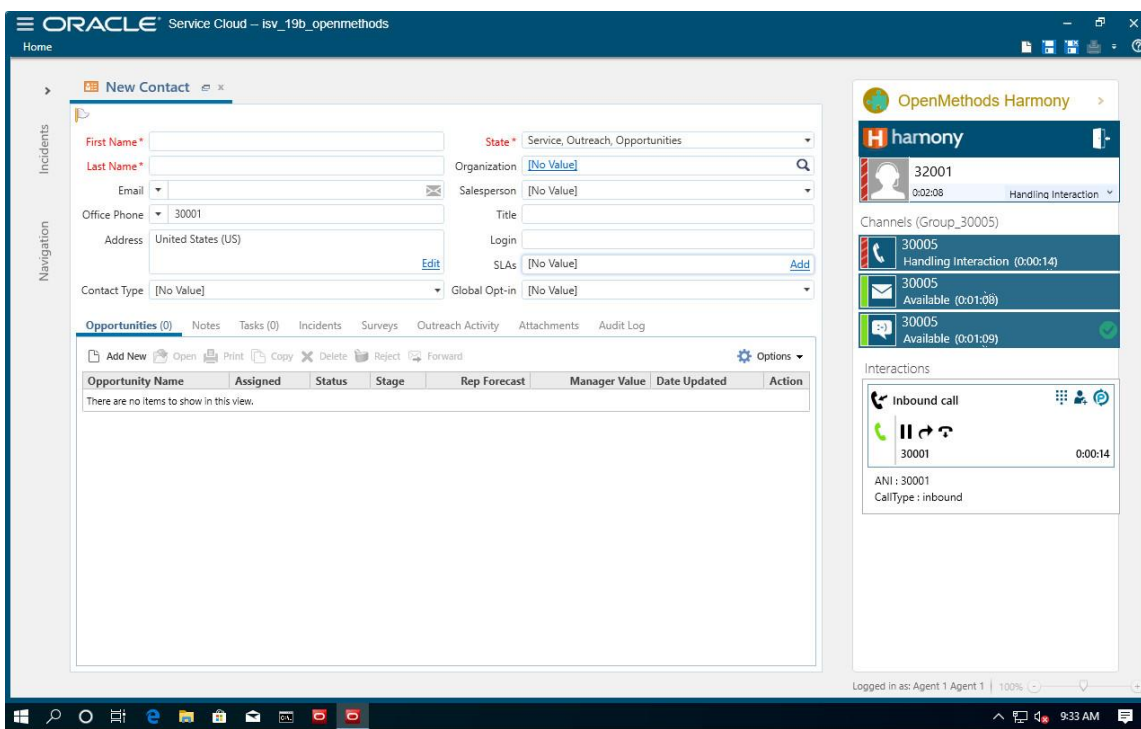
Once logged in to the Service Cloud, log in to the ACD using one of the agents configured in **Section 7.1**.



Once logged in, click on the agent state and make it Available. the following screen shows up.



Place a call to one of the VDNs configured in **Section 5.7**. Once agents receive the calls, answer it. A customer record will pop up in the workspace to the left of the media toolbar:



On Avaya Aura® Application Enablement Services, navigate to the **Status → Status and Control → DMCC Service Summary** to verify the DMCC connection is active.

AVAYA Application Enablement Services Management Console

Welcome: User cust
Last login: Fri Oct 11 11:01:33 2019 from 10.64.115.45
Number of prior failed login attempts: 0
HostName/IP: sildvaes8.sildenvr.org/10.64.115.28
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.0.0.9-1
Server Date and Time: Mon Oct 14 13:06:36 MDT 2019
HA Status: Not Configured

Status | Status and Control | DMCC Service Summary Home | Help | Logout

DMCC Service Summary - Session Summary

Please do not use back button

☐ Enable page refresh every 60 seconds

Session Summary [Device Summary](#)
Generated on Mon Oct 14 10:38:16 MDT 2019

Service Uptime: 11 days, 21 hours 37 minutes
Number of Active Sessions: 1
Number of Sessions Created Since Service Boot: 24
Number of Existing Devices: 0
Number of Devices Created Since Service Boot: 0

	Session ID	User	Application	Far-end Identifier	Connection Type	# of Associated Devices
<input type="checkbox"/>	DB7D5F9CBD3C8F0C2 040AF9243FC061E-24	OMethod	OpenMethods-Avaya	10.64.115.45	XML Unencrypted	0

[Terminate Sessions](#) [Show Terminated Sessions](#)

Item 1-1 of 1
1 Go

Navigate to the **Status → Status and Control → TSAPI Service Summary** to verify the TSAPI connection is active.

AVAYA Application Enablement Services Management Console

Welcome: User cust
Last login: Fri Oct 11 11:01:33 2019 from 10.64.115.45
Number of prior failed login attempts: 0
HostName/IP: sildvaes8.sildenvr.org/10.64.115.28
Server Offer Type: VIRTUAL_APPLIANCE_ON_VMWARE
SW Version: 8.1.0.0.9-1
Server Date and Time: Mon Oct 14 13:07:36 MDT 2019
HA Status: Not Configured

Status | Status and Control | TSAPI Service Summary Home | Help | Logout

CTI User Status

☐ Enable page refresh every 60 seconds

CTI Users: All Users [Submit](#)

Open Streams 5
Closed Streams 50

Open Streams

Name	Time Opened	Time Closed	Tlink Name
OMethod	Fri 04 Oct 2019 01:20:05 PM MDT		AVAYA#SILDVCM8#CSTA#SILDVAES8
OMethod	Fri 04 Oct 2019 01:20:50 PM MDT		AVAYA#SILDVCM8#CSTA#SILDVAES8
DMCCCLCSUserDoNotModify	Fri 11 Oct 2019 02:24:04 PM MDT		AVAYA#SILDVCM8#CSTA#SILDVAES8
OMethod	Fri 11 Oct 2019 06:50:38 AM MDT		AVAYA#SILDVCM8#CSTA#SILDVAES8
OMethod	Mon 14 Oct 2019 10:31:40 AM MDT		AVAYA#SILDVCM8#CSTA#SILDVAES8

[Show Closed Streams](#) [Close All Opened Streams](#) [Back](#)

On Avaya Aura® Communication Manager, use the list monitored-station command to verify station monitors on logged in agents.

list monitored-station																
MONITORED STATION																
Associations:	1		2		3		4		5		6		7		8	
	CTI		CTI		CTI		CTI		CTI		CTI		CTI		CTI	
Station Ext	Lnk	CRV	Lnk	CRV	Lnk	CRV	Lnk	CRV	Lnk	CRV	Lnk	CRV	Lnk	CRV	Lnk	CRV

30002	1	0016														
30005	1	0009														

9. Conclusion

OpenMethods was able to successfully interoperate with Avaya Aura® Communication Manager and Avaya Aura® Application Enablement. All executed test cases were passed.

10. Additional References

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

[1] Administering Avaya Aura® Communication Manager, Release 8.1

[2] Administering Avaya Aura® Application Enablement Services, Release 8.1

Product information for OpenMethods can be obtained by contacting OpenMethods support [1.816.283.8965 (ext. 1), care@openmethods.com]

[1] Harmony Installation & Configuration Guide for Avaya Change History

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