



**Application Notes for OpenMethods Oracle Service Cloud  
Connector Version 4.0 with Avaya Aura® Application  
Enablement Services R6.3 and Avaya Aura®  
Communication Manager R6.3 – Issue 1.0**

**Abstract**

These Application Notes contain instructions for OpenMethods Oracle RightNow Service Cloud Connector 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 Connector and, Avaya Aura® Application Enablement Services and Avaya Aura® Communication Manager.

## 1.1. Product Overview

OpenMethods's Oracle Service Cloud Connector 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, chat, and web form is seamlessly shared between the 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 Connector'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.

### 2.1. Interoperability Compliance Testing

During Interoperability Compliance testing, functional scenarios tested OpenMethods Oracle Service Cloud Connector's ability to:

- Monitor agent status
- Route calls to Oracle Service Cloud Connector
- 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.

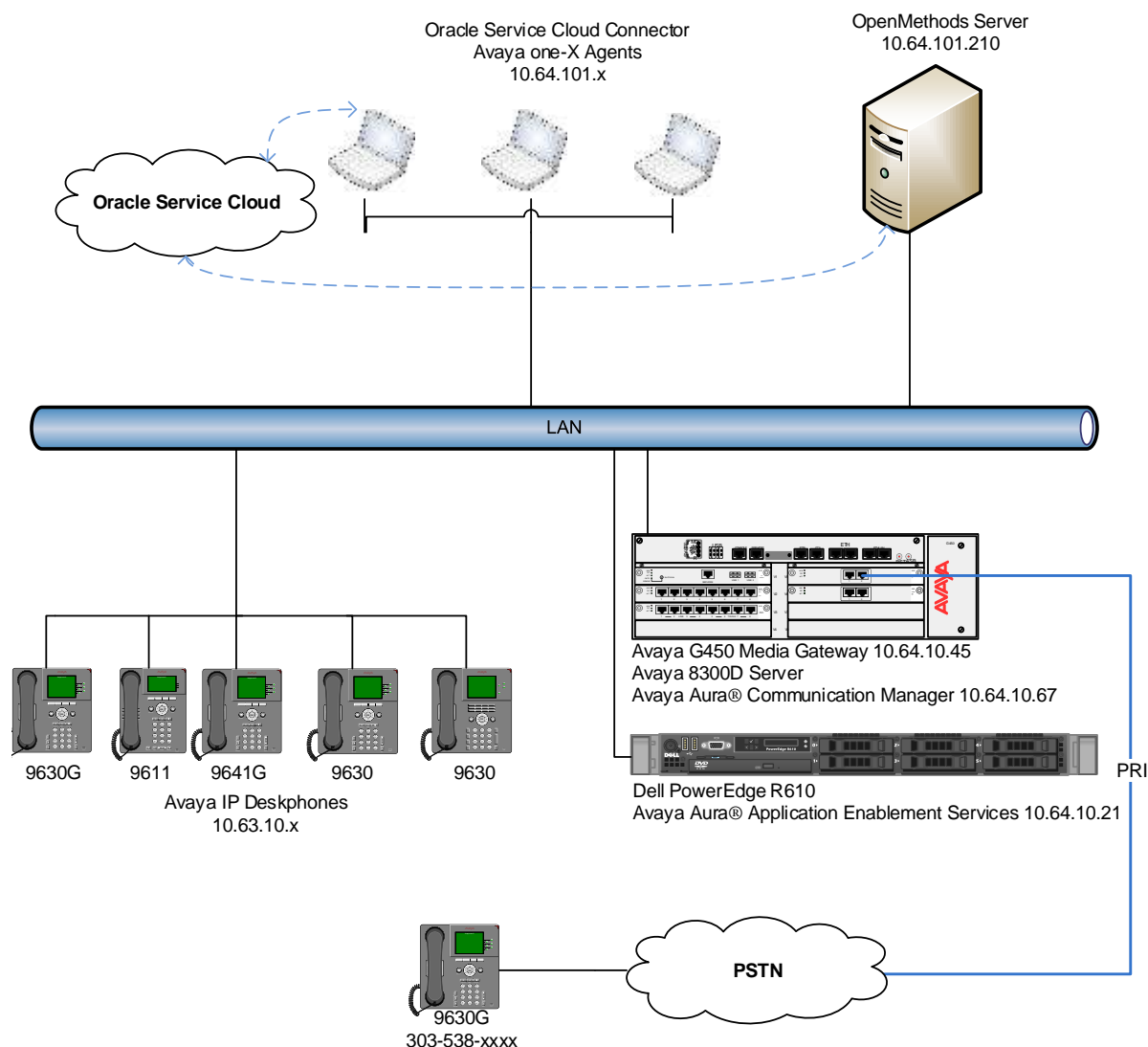
**E-mail:** care@openmethods.com

**Phone:** 1.816.283.8965 (ext. 1)

**Web:** www.openmethods.com

## 3. Reference Configuration

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



**Figure 1:** Reference Configuration of Avaya Environment with OpenMethods

## 4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura <sup>®</sup> Communication Manager running on Avaya S8300D server	6.3.12.0-SP12
Avaya G450 Media Gateway	37.19.0
Avaya Aura <sup>®</sup> Application Enablement Services running on Dell R610	6.3.3.5.10-0
Avaya one-X <sup>®</sup> Agent	2.5.25010
OpenMethods Integration Server	4.0.9
OpenMethods QueueAdapter	4.0.4
OpenMethods PopFlow	4.0.9
OpenMethods Harmony Client	4.0.9
OpenMethods Oracle Service Cloud Connector	4.0

## 5. Configure Avaya Aura® Communication Manager

This section contains steps necessary to configure OpenMethods successfully with Avaya Aura® Communication Manager.

All configurations in Communication Manager were performed via SAT terminal.

### 5.1. Verify Feature and License

Enter the **display system-parameters customer-options** command and ensure that the following features are enabled.

One Page 3, verify **Computer Telephony Adjunct Links** is set to **y**.

display system-parameters customer-options		Page	3 of	11
OPTIONAL FEATURES				
Abbreviated Dialing Enhanced List?	y	Audible Message Waiting?	y	
Access Security Gateway (ASG)?	n	Authorization Codes?	y	
Analog Trunk Incoming Call ID?	y	CAS Branch?	n	
A/D Grp/Sys List Dialing Start at 01?	y	CAS Main?	n	
Answer Supervision by Call Classifier?	y	Change COR by FAC?	n	
ARS?	y	<b>Computer Telephony Adjunct Links?</b>	<b>y</b>	
ARS/AAR Partitioning?	y	Cvg Of Calls Redirected Off-net?	y	
ARS/AAR Dialing without FAC?	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			

On Page 4, verify **ISDN Feature Plus**, **ISDN-PRI**, **IP Trunks** and **Multimedia IP SIP Trunking** are set to **y**.

display system-parameters customer-options		Page 4 of 11
OPTIONAL FEATURES		
Emergency Access to Attendant? y	IP Stations? y	
Enable 'dadmin' Login? y		
Enhanced Conferencing? y	<b>ISDN Feature Plus? y</b>	
Enhanced EC500? y	ISDN/SIP Network Call Redirection? y	
Enterprise Survivable Server? n	ISDN-BRI Trunks? y	
Enterprise Wide Licensing? n	<b>ISDN-PRI? y</b>	
ESS Administration? y	Local Survivable Processor? n	
Extended Cvg/Fwd Admin? y	Malicious Call Trace? y	
External Device Alarm Admin? y	Media Encryption Over IP? n	
Five Port Networks Max Per MCC? n	Mode Code for Centralized Voice Mail? n	
Flexible Billing? n		
Forced Entry of Account Codes? y	Multifrequency Signaling? y	
Global Call Classification? y	Multimedia Call Handling (Basic)? y	
Hospitality (Basic)? y	Multimedia Call Handling (Enhanced)? y	
Hospitality (G3V3 Enhancements)? y	<b>Multimedia IP SIP Trunking? y</b>	
<b>IP Trunks? y</b>		

On Page 10, verify **IP\_API\_A** has a sufficient limit.

change system-parameters customer-options		Page 10 of 11
MAXIMUM IP REGISTRATIONS BY PRODUCT ID		
Product ID	Rel. Limit	Used
AgentSC	* : 10000	0
<b>IP_API_A</b>	* : 18000	0
IP_Agent	* : 18000	0
IP_NonAgt	* : 18000	0
IP_Phone	* : 18000	1
IP_ROMax	* : 18000	0
IP_Soft	* : 18000	0
IP_Supv	* : 18000	0
IP_eCons	* : 414	0
oneX_Comm	* : 18000	0
	: 0	0
	: 0	0
	: 0	0
	: 0	0
	: 0	0
(NOTE: You must logoff & login to effect the permission changes.)		

## 5.2. Configure Stations – Call Center

Add station 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**.
- Set **IP SoftPhone** to **y**.

<b>add station 53001</b>		Page 1 of 5
STATION		
<b>Extension: 53001</b>	Lock Messages? n	BCC: 0
<b>Type: 9640</b>	<b>Security Code: 123456</b>	TN: 1
Port: IP	Coverage Path 1: 98	COR: 1
Name: Station 53001	Coverage Path 2:	COS: 1
	Hunt-to Station:	Tests? y
STATION OPTIONS		
	Time of Day Lock Table:	
Loss Group: 19	Personalized Ringing Pattern: 1	
	Message Lamp Ext: 53001	
Speakerphone: 2-way	Mute Button Enabled? y	
Display Language: english	Button Modules: 0	
Survivable GK Node Name:		
Survivable COR: internal	Media Complex Ext:	
Survivable Trunk Dest? y	<b>IP SoftPhone? y</b>	
	IP Video Softphone? n	
	Short/Prefixed Registration Allowed: default	

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

add station 53001		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:	
<b>BUTTON ASSIGNMENTS</b>			
1: call-appr		5: <b>aux-work</b>	RC: Grp:
2: call-appr		6: <b>after-call</b>	Grp:
3: call-appr		7: <b>manual-in</b>	Grp:
4: <b>auto-in</b>	Grp:	8: <b>logout</b>	
voice-mail			

### 5.3. Configure Stations – CTI

Add CTI stations that will be used by OpenMethods. 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 53011		Page 1 of 5	
STATION			
Extension: 53011	Lock Messages?	n	BCC: 0
<b>Type: 6408D+</b>	Security Code:		TN: 1
<b>Port: X</b>	Coverage Path 1:		COR: 1
<b>Name: AWOH1</b>	Coverage Path 2:		COS: 1
	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: 53011		
Display Language: english	Mute Button Enabled? y		
Survivable COR: internal	Media Complex Ext:		
Survivable Trunk Dest? y	IP SoftPhone? n		
	Remote Office Phone? 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**.

<b>add hunt-group 3</b>		Page 1 of 4	
HUNT GROUP			
Group Number: 3		ACD? y	
Group Name: Voice		Queue? y	
Group Extension: 54003		Vector? y	
Group Type: ucd-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:	

On Page 2, set **Skill** to **y** and **Measured** to **both**.

add hunt-group 3		Page 2 of 4
HUNT GROUP		
<b>Skill?</b> y	Expected Call Handling Time (sec): 20	
AAS? n	Service Level Target (% in sec): 80 in 20	
<b>Measured: both</b>		
Supervisor Extension:		
Controlling Adjunct: none		
VuStats Objective:		
Multiple Call Handling: none		
Timed ACW Interval (sec):		
After Xfer or Held Call Drops? n		

**Note:** During compliance test, 3 hunt groups were created to test email, chat and voice.

## 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)**.

add agent-loginID 5301		Page 1 of 3
AGENT LOGINID		
Login ID: 5301	AAS? n	
<b>Name: H.323 Agent 1</b>	AUDIX? n	
TN: 1	Check skill TNs to match agent TN? n	
COR: 1		
Coverage Path:	LWC Reception: spe	
Security Code: 1234	LWC Log External Calls? n	
	AUDIX Name for Messaging:	
	LoginID for ISDN/SIP Display? n	
	<b>Password: 123456</b>	
	<b>Password (enter again): 123456</b>	
	Auto Answer: station	
	MIA Across Skills: system	
	ACW Agent Considered Idle: 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		

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 5301
                                AGENT LOGINID
    Direct Agent Skill:
Call Handling Preference: skill-level
                                Service Objective? n
                                Local Call Preference? n

    SN    RL  SL              SN    RL SL              SN    RL SL              SN    RL SL
1:  3      1        16:          31:          46:
2:  4      1        17:          32:          47:
3:  5      1        18:          33:          48:
4:                                34:          49:
5:                                35:          50:
6:                                36:          51:
7:                                37:          52:
8:                                38:          53:
9:                                39:          54:
10:                               40:          55:
11:                               41:          56:
12:                               42:          57:
13:                               43:          58:
14:                               44:          59:
15:                               45:          60:

```

## 5.6. Configure Vectors

Use **change vector *n*** to configure a Vector, where *n* is an available Vector number. Configure a simple vector to queue the call as follows:

change vector 3

Page1 of 6

CALL VECTOR

Number: 3

Name: Voice

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

2 secs hearing ringback

02 queue-to

skill 3 pri m

03 wait-time

30 secs hearing music

04 goto step

1 if unconditionally

05

06

07

08

09

10

11

12

Press 'Esc f 6' for Vector Editing

## 5.7. Configure 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.

<b>add vdn 57801</b>	Page 1 of 3
VECTOR DIRECTORY NUMBER	
Extension: 57801	
<b>Name*: Inbound</b>	
<b>Destination: Vector Number 1</b>	
Attendant Vectoring? n	
Meet-me Conferencing? n	
Allow VDN Override? n	
COR: 1	
TN*: 1	
Measured: none	
VDN of Origin Annc. Extension*:	
1st Skill*:	
2nd Skill*:	
3rd Skill*:	

**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:	aes10210	devconnect123	y	in use	
2:	aes6_tr1	devconnect123	y	in use	
3:					
4:					
5:					
6:					
7:					
8:					
9:					

## 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.

<b>add cti-link 1</b>	Page 1 of 3
CTI Link: 1	CTI LINK
<b>Extension: 58001</b>	
<b>Type: ADJ-IP</b>	
<b>Name: aes10210</b>	COR: 1

## 6. Configure Avaya Aura® Application Enablement Services

Configuration of Avaya Aura® Application Enablement Services requires a user account be configured for OpenMethods.

### 6.1. Configure User

All administration is performed by web browser, <https://<aes-ip-address>/>

A user needs to be 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 **Apply**.

The screenshot shows the 'Add User' form within the Avaya Aura User Management interface. The breadcrumb trail at the top reads 'User Management | User Admin | Add User'. The left sidebar contains a tree view with categories like 'AE Services', 'Communication Manager', 'High Availability', 'Licensing', 'Maintenance', 'Networking', 'Security', 'Status', 'User Management', 'Service Admin', and 'User Admin'. Under 'User Admin', the 'Add User' option is selected. The main form area is titled 'Add User' and includes a note: 'Fields marked with \* can not be empty.' The form fields are: '\* User Id' (text input), '\* Common Name' (text input), '\* Surname' (text input), '\* User Password' (text input), '\* Confirm Password' (text input), 'Admin Note' (text input), 'Avaya Role' (dropdown menu with 'None' selected), 'Business Category' (text input), 'Car License' (text input), 'CM Home' (text input), 'Css Home' (text input), and 'CT User' (dropdown menu with 'Yes' selected).



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

**Edit CTI User**

User Profile:

User ID: interop  
Common Name: interop  
Worktop Name: NONE  
Unrestricted Access: ☒

Call and Device Control:

Call Origination/Termination and Device Status: None

Call and Device Monitoring:

Device Monitoring: None  
Calls On A Device Monitoring: None  
Call Monitoring: ☐

Routing Control:

Allow Routing on Listed Devices: None

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 **cm10217** for this test environment:

AE Services  
Communication Manager Interface  
Switch Connections  
Dial Plan  
High Availability  
Licensing  
Maintenance  
Networking  
Security

**Switch Connections**

Add Connection

Connection Name	Processor Ethernet	Msg Period	Number of Active Connections
<input checked="" type="radio"/> cm10217	Yes	30	1
<input type="radio"/> cm2141	Yes	30	0

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 as shown in **Section 5.8**.

**Connection Details - cm10217**

Switch Password: [Masked]

Confirm Switch Password: [Masked]

Msg Period: 30 Minutes (1 - 72)

Provide AE Services certificate to switch: ☐

Secure H323 Connection: ☐

Processor Ethernet: ☒

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)**.

**Edit Processor Ethernet IP - cm10217**

10.64.102.17 Add/Edit Name or IP

Name or IP Address	Status
10.64.102.17	In Use

Back

### 6.3. Configure TSAPI Link

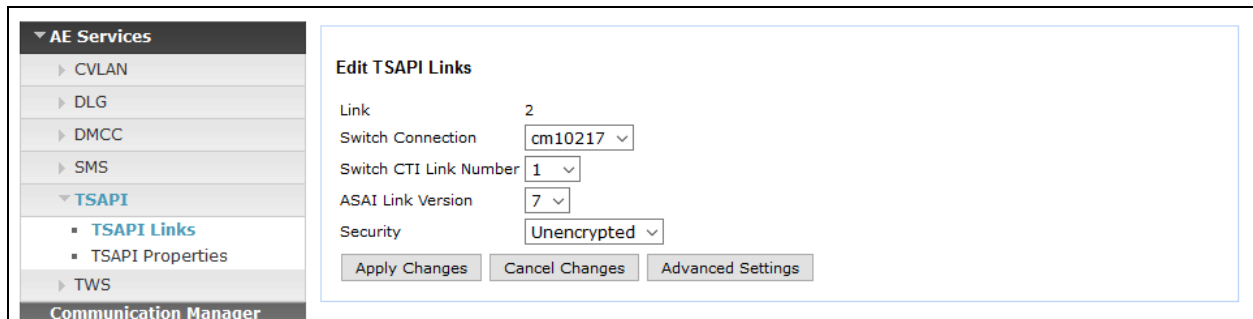
Navigate to the **AE Services → TSAPI → TSAPI Links** page to add the TSAPI CTI Link. Click **Add Link** (not shown).

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.

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

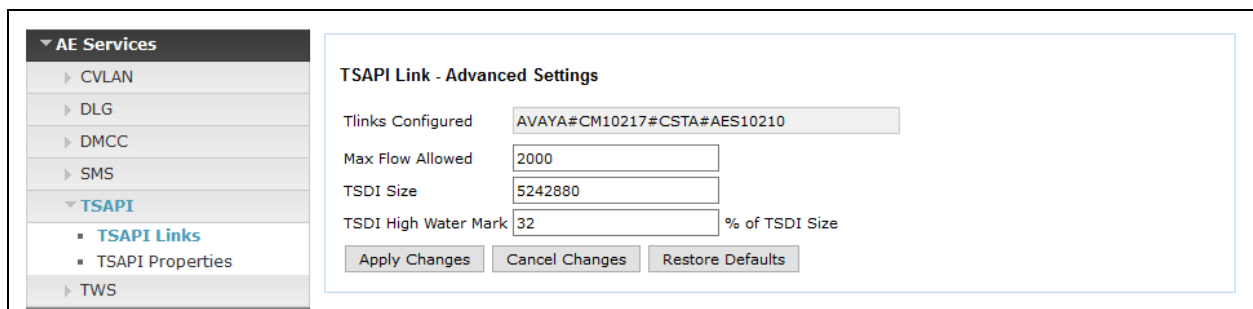
Click **Apply Changes**.

Configuration shown below was previously configured.



The screenshot shows the 'Edit TSAPI Links' configuration page. On the left is a navigation menu with 'AE Services' expanded, showing options like CVLAN, DLG, DMCC, SMS, TSAPI (expanded to show TSAPI Links, TSAPI Properties, and TWS), and Communication Manager. The main content area is titled 'Edit TSAPI Links' and contains the following fields: 'Link' with value '2', 'Switch Connection' with a dropdown menu showing 'cm10217', 'Switch CTI Link Number' with a dropdown menu showing '1', 'ASAI Link Version' with a dropdown menu showing '7', and 'Security' with a dropdown menu showing 'Unencrypted'. At the bottom of the form 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. On the left is the same navigation menu as the previous screenshot. The main content area is titled 'TSAPI Link - Advanced Settings' and contains the following fields: 'Tlinks Configured' with a text input field showing 'AVAYA#CM10217#CSTA#AES10210', 'Max Flow Allowed' with a text input field showing '2000', 'TSDI Size' with a text input field showing '5242880', and 'TSDI High Water Mark' with a text input field showing '32' and a label '% of TSDI Size'. At the bottom of the form are three buttons: 'Apply Changes', 'Cancel Changes', and 'Restore Defaults'.

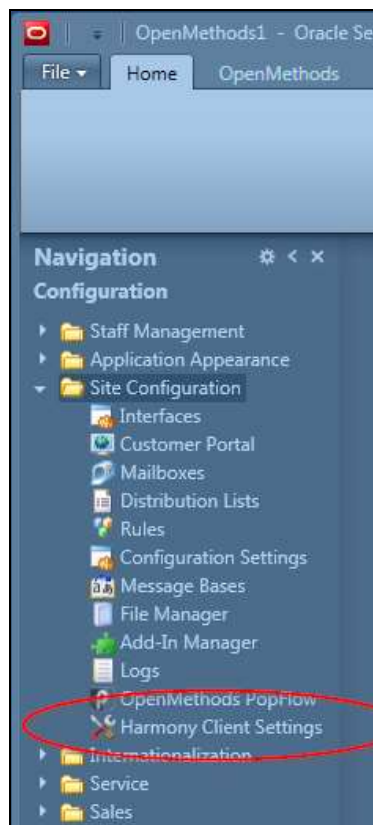
## 7. Configure OpenMethods

There are multiple OpenMethods components used in the OpenMethods integration with Avaya. Note that the configuration for OpenMethods is performed by OpenMethods engineers. Configuration in this section is for informational purposes.

- **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 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 route.

### 7.1. Harmony Client

On a PC running the Harmony Client, settings are configured with the Harmony Client Settings application, within Oracle Service Cloud desktop application. This can be found from the Oracle Service Cloud desktop configuration menu.



### 7.1.1. Harmony Client - Agent Settings

For compliance testing, the following three users were created.

Oracle Service Cloud User : “Avaya Certification1”.

The screenshot displays the 'Agent Details' and 'Channel Details' configuration windows for an Avaya Harmony Client agent.

**Agent Details:**

- Display Name: Avaya Certification1
- Username: 5301
- Password: [Masked]
- End Completes Interaction: ☐
- Auto Answer: ☐
- Single SignOn Enabled: ☐ Type: Basic
- Extension: [Empty]
- Station Type: This Computer
- WorkStation: [Empty]
- Remote Number: [Empty]
- Theme: [Empty]
- Developer Mode: [Empty] (comma delimited)
- Screen Pop: ☐ On Ring ☒ On Answer
- Report Pop: ☒ On Ring ☐ On Answer

**Channel Details:**

**Defaults:**

- Channel: [Empty]
- Channel Type: Telephony
- Channel Group: [Empty]
- Queue(s): [Empty] (comma delimited)

**Client Defined Channels:** ☐

- Channel: [Empty]
- Channel Name: [Empty]
- Channel Type: Telephony
- Channel Enabled: ☐
- Queue(s): [Empty]

Buttons: Add, Clear, Remove, Save, Close

Oracle Service Cloud User: “Avaya Certification2”.

Agent Details	Channel Details
<div>Display Name: <input type="text" value="Avaya Certification2"/></div> <div>Username: <input type="text" value="5302"/></div> <div>Password: <input type="password" value="••••"/></div> <div>End Completes Interaction: <input type="checkbox"/> Auto Answer: <input type="checkbox"/></div> <div>Single SignOn Enabled: <input type="checkbox"/> Type: <input type="text" value="Basic"/></div> <div>Extension: <input type="text"/></div> <div>Station Type: <input type="text" value="This Computer"/></div> <div>WorkStation: <input type="text"/></div> <div>Remote Number: <input type="text"/></div> <div>Theme: <input type="text"/></div> <div>Developer Mode: <input type="text"/></div> <div>Screen Pop: <input type="radio"/> On Ring <input checked="" type="radio"/> On Answer</div> <div>Report Pop: <input checked="" type="radio"/> On Ring <input type="radio"/> On Answer</div>	<div>Defaults</div> <div>Channel: <input type="text"/></div> <div>Channel Type: <input type="text" value="Telephony"/></div> <div>Channel Group: <input type="text"/></div> <div>Queue(s): <input type="text"/></div> <div><small>comma delimited</small></div> <div>Client Defined Channels <input type="checkbox"/></div> <div>Channel: <div></div></div> <div>Channel Name: <input type="text"/></div> <div>Channel Type: <input type="text" value="Telephony"/></div> <div>Channel Enabled: <input type="checkbox"/></div> <div>Queue(s): <input type="text"/></div> <div><input type="button" value="Add"/> <input type="button" value="Clear"/> <input type="button" value="Remove"/></div>

Oracle Service Cloud User: “Avaya Certification3”.

Agent Details	Channel Details
Display Name: <input type="text" value="Avaya Certification3"/> Username: <input type="text" value="5321"/> Password: <input type="password" value="••••"/> End Completes Interaction: <input type="checkbox"/> Auto Answer: <input type="checkbox"/> Single SignOn Enabled: <input type="checkbox"/> Type: <input type="text" value="Basic"/> Extension: <input type="text"/> Station Type: <input type="text" value="This Computer"/> WorkStation: <input type="text"/> Remote Number: <input type="text"/> Theme: <input type="text"/> Developer Mode: <input type="text"/> Screen Pop: <input type="radio"/> On Ring <input checked="" type="radio"/> On Answer Report Pop: <input checked="" type="radio"/> On Ring <input type="radio"/> On Answer	Defaults Channel: <input type="text"/> Channel Type: <input type="text" value="Telephony"/> Channel Group: <input type="text"/> Queue(s): <input type="text"/> <small>comma delimited</small> Client Defined Channels <input type="checkbox"/> Channel: <input type="text"/> Channel Name: <input type="text"/> Channel Type: <input type="text" value="Telephony"/> Channel Enabled: <input type="checkbox"/> Queue(s): <input type="text"/> Add Clear Remove Save Close

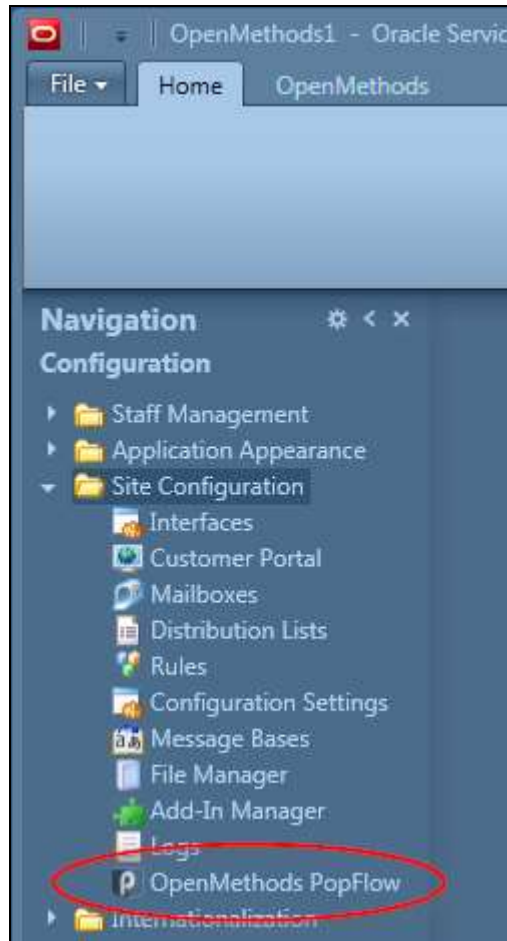
### 7.1.2. Harmony Client - Server Settings

Server settings for the Harmony client, as used during the compliance test.

Server Name	OMIS AVAYA CERT
Description	OMIS 4 on AvayaCert
Integration Server URI	<a href="http://10.64.101.210:8088">http://10.64.101.210:8088</a>
Queue Adapter URI	tcp://10.64.101.210:45642
Type	OMIS
Model	RNA
Version	4.0
Processor Name	avaya om
Timeout	10000
Extension	false
Workstation	false
Helium	false

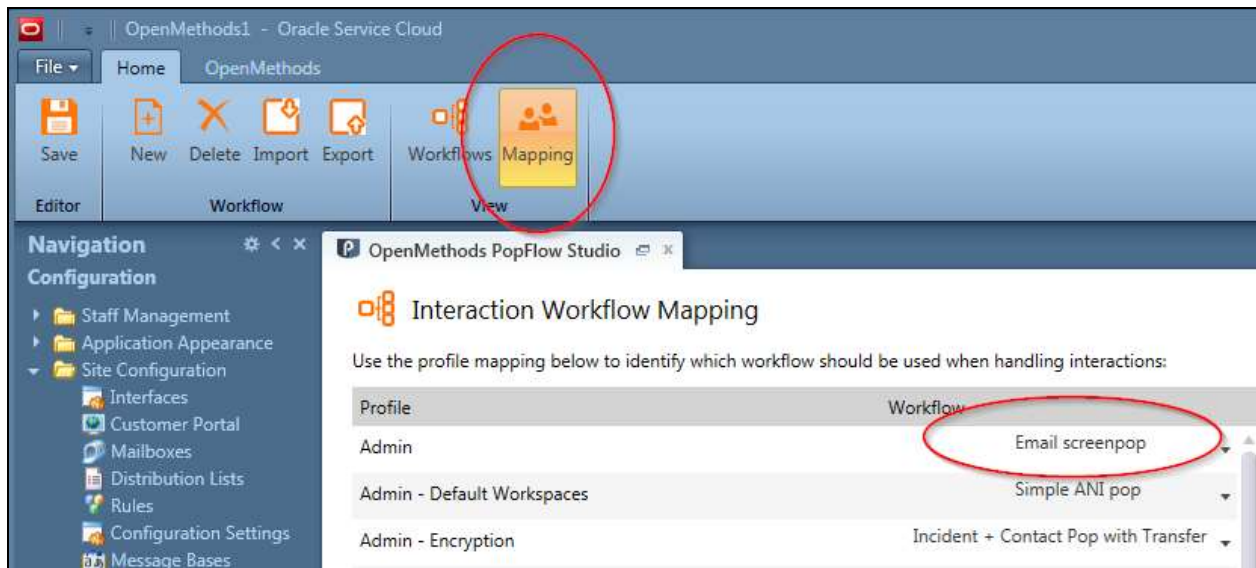
## 7.2. Harmony PopFlow

Harmony PopFlow is configured via OpenMethods Harmony PopFlow Editor. It is located as an add-in and can be launched from the PopFlow app icon in Oracle Service Cloud desktop configuration menu.

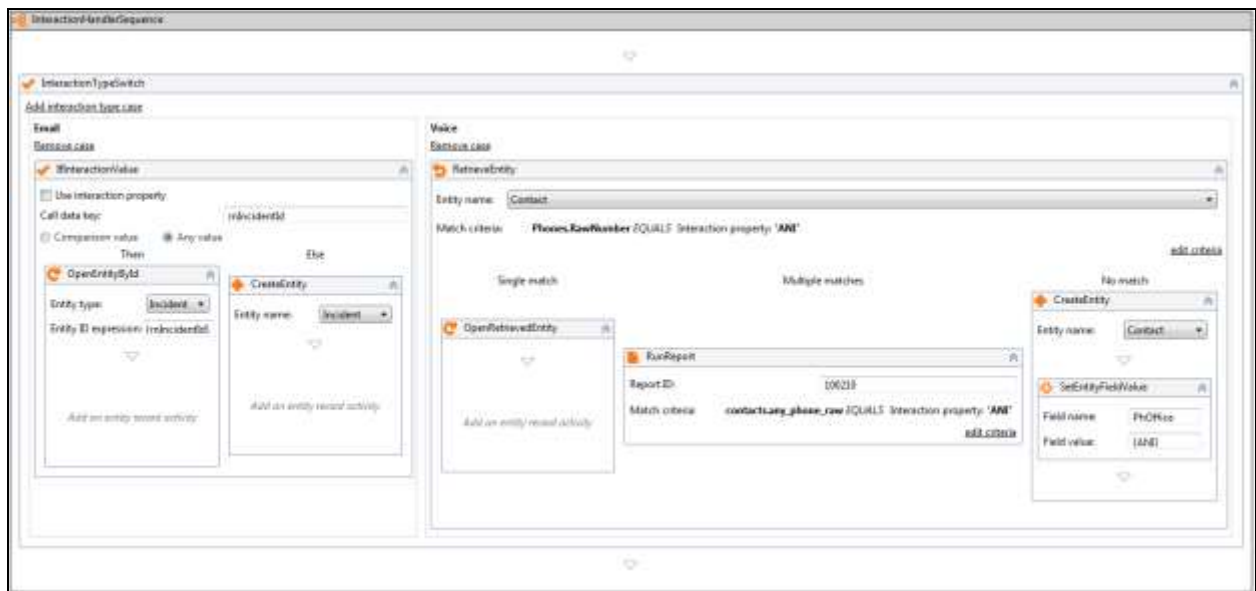




A screenpop script mapping needs to be configured for the Oracle Service Cloud. For this certification we used the Admin profile and “Email screenpop” PopFlow script. The screen shot below shows the popflow script binding.



The “Email screenpop” script configuration is below.



### 7.3. Harmony Integration Server

Below is the master configuration file for the Harmony Integration Server. This file is in standard json format. The items in orange font below are values that were used during the compliance testing.

File location

- C:\OpenMethods\omis4\configuration\omis.json

```
{
  "generalConfiguration": {
    "__comment": [
      "This is a freeform configuration area that contains multiple sections.",
      "This configuration area is only accessible through the main IServerConfig service"
    ],
    "sections": []
  },
  "servicesConfiguration": {
    "__comment": [
      "Services defined in this area will automatically be registered as
      IServerServiceConfig service objects.",
      "The properties section will be published as osgi service properties for the service
      object"
    ],
    "services": [
      {
        "properties": {
          "type": "com.openmethods.ep.network.provider",
          "providerType": "com.openmethods.ep.network.http"
        },
        "configuration": {
          "endpoints": [
            {
              "port": 8088,
              "secure": false,
              "keyStore": "",
              "keyPass": ""
            },
            {
              "port": 8443,
              "secure": true,
              "keyStore": "./omis.keystore",
              "keyPass": "changeit"
            }
          ],
          "protocols": []
        }
      },
      {
        "properties": {
          "type": "com.openmethods.ep.network.provider",
          "providerType": "com.openmethods.ep.network.socket"
        },
        "configuration": {
          "endpoints": [
            {
              "port": 45645,
              "secure": false,
              "keyStore": "",
              "keyPass": ""
            },
            {
              "port": 45646,
              "secure": true,

```

```

        "keyStore": "./omis.jks",
        "keyPass": "changeit"
    },
    "protocols": []
},
{
    "properties": {
        "type": "com.openmethods.iserver.processor"
    },
    "configuration": {
        "processorType": "avaya",
        "groupId": "avaya_om",
        "options": {
            "default_model": "RNA",
            "TLinkName": "AVAYA#CM10217#CSTA#AES10210",
            "AESUser": "interop",
            "AESPassword": "Interop123!",
            "AESAddress": "10.64.102.10",
            "AESPort": 450,
            "TelephonyQueues": [
                54003
            ],
            "EmailQueues": [
                "54005"
            ],
            "ChatQueues": [
                "54004"
            ]
        }
    }
},
{
    "properties": {
        "type": "com.openmethods.iserver.workflowmanager"
    },
    "configuration": {
        "workflowDirectory": "file:///C:/OpenMethods/omis4/workflows/"
    }
},
{
    "properties": {
        "type": "com.openmethods.iserver.shutdownserver"
    },
    "configuration": {
        "interface": "127.0.0.1",
        "port": 45646
    }
},
{
    "properties": {
        "type": "com.openmethods.iserver.authentication"
    },
    "configuration": {
        "users": [
            {
                "name": "guest",
                "salt":
"6A6ECE6B6455D1EB468B483473F8FCF15CDC98AE021BCCFB892FDB84A5885D39",
                "password": "65DBD27E999521B6E329B211F703EF5A",
                "contexts": [
                    {
                        "id": "*",
                        "grants": [
                            {
                                "action": "bindService",
                                "restriction":
"(com.openmethods.ep.network.serviceType=com.openmethods.ep.network.core.serviceMonitor)"

```

```

    }
  ]
},
{
  "name": "tgilman",
  "salt":
"97B5DC08B37720F93A71024300A1E01B1858BBA7A6860708E76688BB36FEA827",
  "password": "7F20527381103032BE1AD7860946EC2B",
  "contexts": [
    {
      "id": "*",
      "grants": [
        {
          "action": "bindService",
          "restriction":
"(com.openmethods.ep.network.serviceType=com.openmethods.ep.network.core.serviceMonitor)"
        }
      ]
    },
    {
      "id": "PRIVATE",
      "grants": [
        {
          "action": "*"
        }
      ]
    }
  ]
}
]
}
}
}
}
}
}
}
```

## 7.4. Harmony Queue

Harmony Queue Adapter runs as a Windows service. All settings are stored in the registry. Items highlighted in orange font were configured during the compliance test.

### Registry Key

- [HKEY\_LOCAL\_MACHINE\SOFTWARE\OpenMethods\QueueAdapter\Settings]

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SOFTWARE\OpenMethods\QueueAdapter\Settings]
"LogFileDirectory"="C:\Users\Administrator\AppData\Roaming\OpenMethods\QueueAdapter\"
"LogFileSize"="1000000"
"LogArchiveCount"="100"
"LogConfigLevel"="ULTRA"
"QueueAttempts"="5"
"QueueSize"="50"
"HighAvailRetrieve"="All"
"HighAvailTimeout"="10"
"HighAvailName"=""
"RightNowSiteUrl"="https://opn-openmethods1.rightnowdemo.com"
"RightNowInterface"="opn_openmethods1"
"RightNowUsername"="connect2"
"RightNowPassword"="XXXXXX"
"RightNowEmailReportId"="100221"
"RightNowChatReportId"="101091"
"RightNowEmailReportLimit"="1000"
"RightNowEmailPollInterval"="60"
"RightNowChatPollInterval"="10"
"RightNowChatQueueEnabled"="No"
"RightNowEmailQueueEnabled"="Yes"
"RightNowEmailQueueSize"="50"
"RightNowEmailQueueMap"="NONE"
"RightNowEmailChannelMap"="CSS Email,CSS Web,MA Email,MA Web,Email"
"RightNowChatQueueMap"="Open Methods Chat"
"RightNowChatChannelMap"="Chat"
"RightNowChatQueueSize"="50"
"RightNowTestQueueType"="EMAIL2GENERIC"
"RightNowChatAgentListenerPort"="45642"
"RightNowChatUsername"="connect2"
"RightNowChatAgentPopEnabled"="Yes"
"RightNowChatEnabledInService"="Yes"
"RightNowChatIgnore"="omchat@example.com"
"RightNowChatPostSubmitEnabled"="No"
"ChatCustomProductKey"="Product"
"ChatCustomCategoryKey"="Category"
"ChatCustomProductValue"=""
"ChatCustomKVP"=""
"ChatCustomAssignKeys"="Last_Four=c$credit_card_last4_text"
"ChatCustomProductValues"=""
"ChatCustomCategoryValues"=""
"ChatStopACDWaitTime"="1"
"TrackUnwatchedQueueMovement"="No"
"WatchedQueues"="$map"
"WatchedStatuses"="New,Updated by Customer"
"EmailServer"="localhost"
"EmailPort"="25"
"EmailUsername"=""
"EmailPassword"=""
"EmailFrom"="nobody@localhost"
"EmailTo"="$map"
"EmailBody"=""
"EmailSubject=""
```

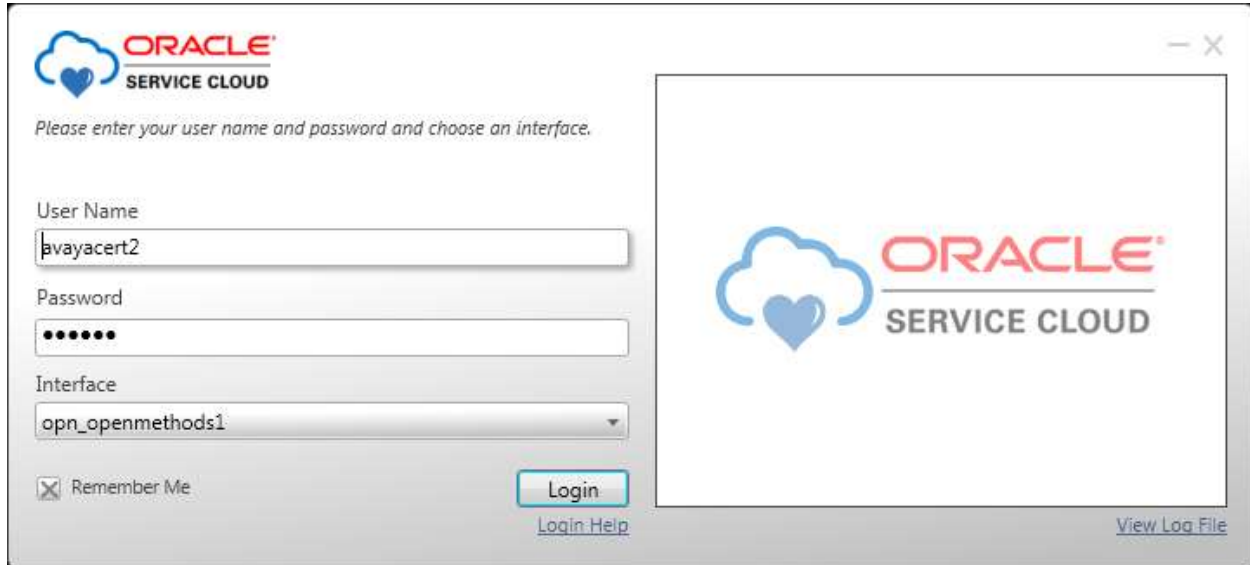
```

"EmailIncludeBody"="No"
"EmailIncludeAttachments"="No"
"CleanupAutoPurge"="No"
"CleanupFrequency"="Daily"
"CleanupAge"="> 90 days"
"CleanupTime"="1/11/2016 2:00:00 AM"
"FailureSendFrequency"="Daily"
"FailureAdminEmail"="admin@localhost"
"FailureFromAddress"="queueadapter@localhost"
"FailureNotifyTime"="1/11/2016 12:00:00 PM"
"MapType"="Queue"
"HistoryAppendEnabled"="Yes"
"GenericConnector.ClassName"="OMQueueAdapters.Avaya.OMQueueAdapterAvaya"
"GenericConnector.DLLPathWithFileName"="C:\\\\Program
Files\\\\OpenMethods\\\\OmQueueAdapter\\\\OMQueueAdapterAvaya.dll"
"GenericConnector.QueueField"="Queue"
"GenericConnector.Enabled"="Yes"
"RightNowEmailQueueType"="EMAIL2GENERIC"
"OMQueueAdapterAvaya.IPAddressToServer"="10.64.102.10"
"OMQueueAdapterAvaya.IPPortToServer"="4721"
"OMQueueAdapterAvaya.SessionName"="OpenMethods-Avaya"
"OMQueueAdapterAvaya.LoginName"="interop"
"OMQueueAdapterAvaya.LoginPassword"="Interop123!"
"OMQueueAdapterAvaya.SessionCleanupDelay"="60"
"OMQueueAdapterAvaya.SessionDuration"="180"
"OMQueueAdapterAvaya.ProtocolVersion"="PROTOCOL_VERSION_6_3_3"
"OMQueueAdapterAvaya.UseSecureSockets"="false"
"OMQueueAdapterAvaya.EnableAutoKeepAlive"="true"
"OMQueueAdapterAvaya.AllowCertificateNameMismatch"="false"
"OMQueueAdapterAvaya.UUIDDelimiter"="&"
"OMQueueAdapterAvaya.AWOHHuntGroupExt"="19041"
"OMQueueAdapterAvaya.Queue2VDNMapping"="Tier 1=19011&1=19021"
"OMQueueAdapterAvaya.AvayaSwitchName"="CM10217"
"RightNowChatPassword"="XXXXXXXX"
"RightNowChatReportLimit"="1000"
"RightNowChatAcceptOnly"=""
"RightNowChatPostSubmitQueue"=""

```

## 8. Verification Steps

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

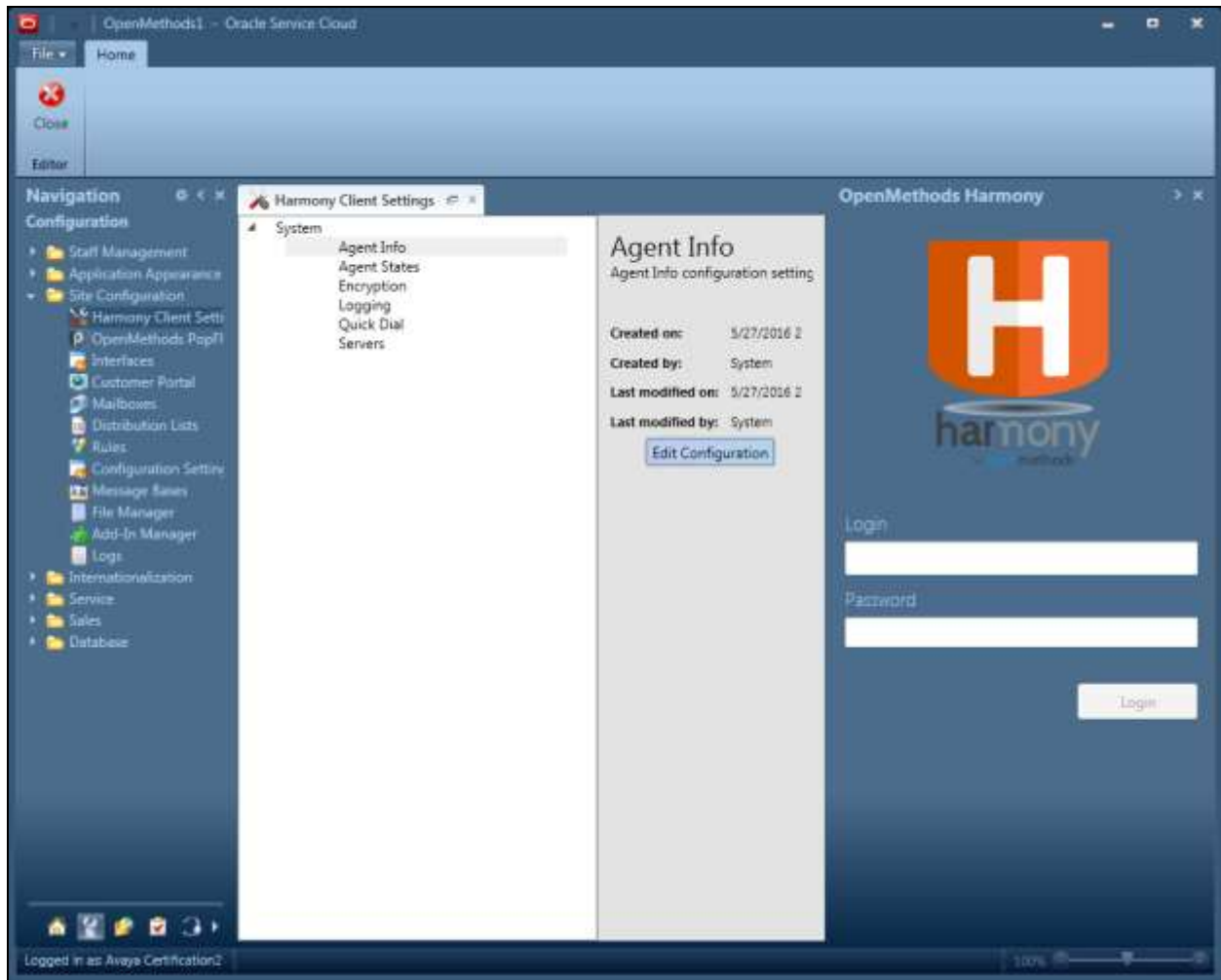


The screenshot shows the Oracle Service Cloud login window. The window has a title bar with a close button. The main content area is divided into two sections. The left section contains the login form, and the right section contains a large Oracle Service Cloud logo. The login form includes the following fields and controls:

- User Name:** A text input field containing the value "avayacert2".
- Password:** A password input field with masked characters (dots).
- Interface:** A dropdown menu with the selected value "opn\_openmethods1".
- Remember Me:** A checkbox that is checked.
- Login:** A button to submit the login form.
- Login Help:** A link below the Login button.
- View Log File:** A link in the bottom right corner.

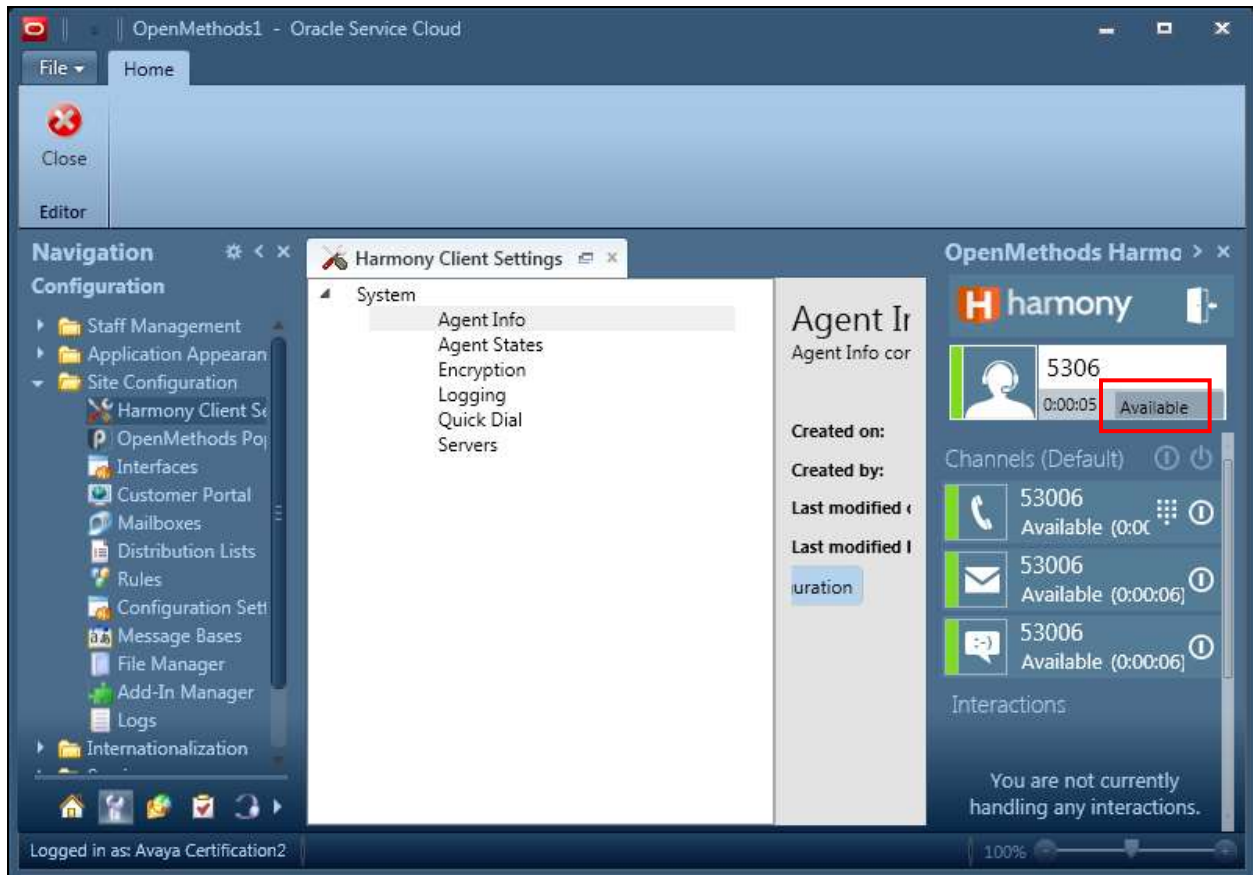
The Oracle Service Cloud logo is displayed in the top left corner of the window and in a larger format on the right side of the window.

Once logged in, log in using one of the agents configured in **Section 5.5**.

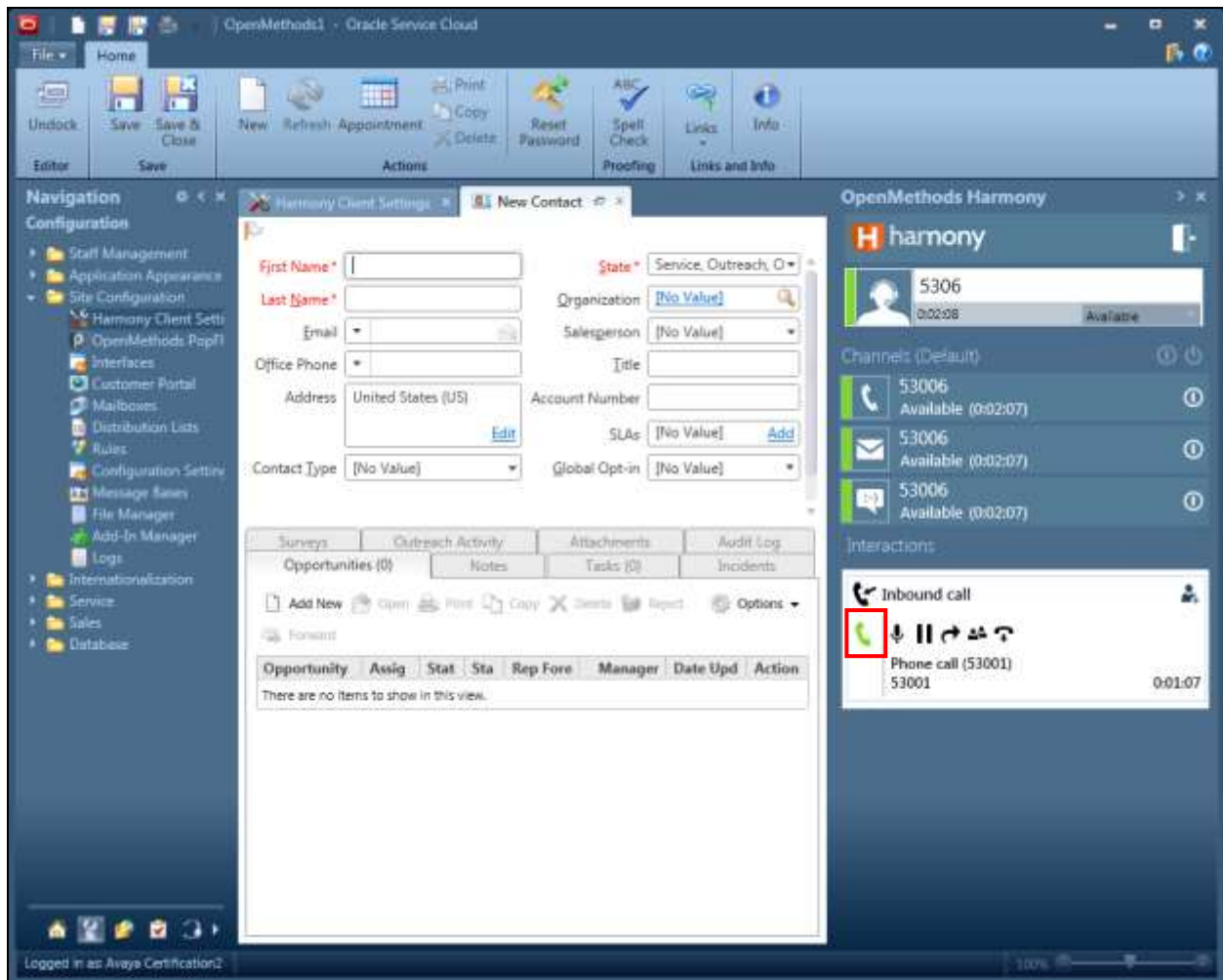




Once logged in, click on the agent state and make it **Available** the following screen shows.



Place a call to one of the VDNs configured in **Section 5.7**. Once agents receives the calls select green phone icon to answer it.



## 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 6.3

[2] Administering Avaya Aura® Application Enablement Services, Release 6.3

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

[1] Harmony Installation & Configuration Guide for Avaya

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