



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring akeira™ by Uniphore Software Systems, Inc with Avaya Aura® Experience Portal – Issue 1.0

Abstract

These Application Notes describe the procedure for configuring akeira™ by Uniphore Software Systems, Inc to interoperate with Avaya Aura® Experience Portal.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as the observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the procedure for configuring akeira™ by Uniphore Software Systems, Inc (akeira™) with Avaya Aura® Experience Portal (Experience Portal).

akeira™ is an AI based virtual assistant capable of automating mundane tasks and provide a seamless conversational experience to end users that dial into Avaya Aura® based contact centers. The application notes focus on akeira™ integration with Experience Portal in support of inbound Interactive Voice Response (IVR) calls via Session Manager (SIP) or Communication Manager (H.323).

2. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability test. Both the feature test cases, and serviceability test cases were performed manually. The feature test verified the feature interoperability between akeira™ and Experience Portal and the serviceability test verified the ability of akeira™ to recover under adverse conditions.

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 akeira™ did not utilize secure capabilities.

Note that, HTTP was used during the compliance test, but HTTPS is supported by akeira™ as well.

2.1. Interoperability Compliance Testing

The general test approach included verification of a successful integration of the akeira™ application with Experience Portal. The test focused on akeira™ integration with Experience Portal in support of inbound Interactive Voice Response (IVR) calls via Session Manager (SIP) or Communication Manager (H.323). Once the application was connected, the akeira™ software worked in conjunction with Experience Portal to play a menu and the user can select using speech.

During the compliance test, the following call scenarios and call flow elements were used to verify akeira™ functionality.

- Inbound calls
- Outbound calls
- Call termination by originator
- Call termination by destination party
- User input using speech
- Blind transfers
- Simultaneous calls
- Calls to and from Experience Portal via SIP and H.323.

2.2. Test Results

Uniphore Software Systems, Inc. akeira™ successfully completed the compliance testing.

2.3. Support

Technical support for the akeira™ solution can be obtained by contacting Uniphore Software Systems, Inc. at:

- Email: support@uniphore.com
- Web: <https://www.uniphore.com/contact/>

3. Reference Configuration

Figure 1 illustrates the reference configuration used during testing. In the reference configuration, the akeira™ was installed on a remote server to facilitate integration with Experience Portal. An incoming call from PSTN to akeira™ is first received by Communication Manager which routes the call to Experience Portal via SIP trunks (or H.323 stations). Experience Portal then invokes the configured akeira™ application.

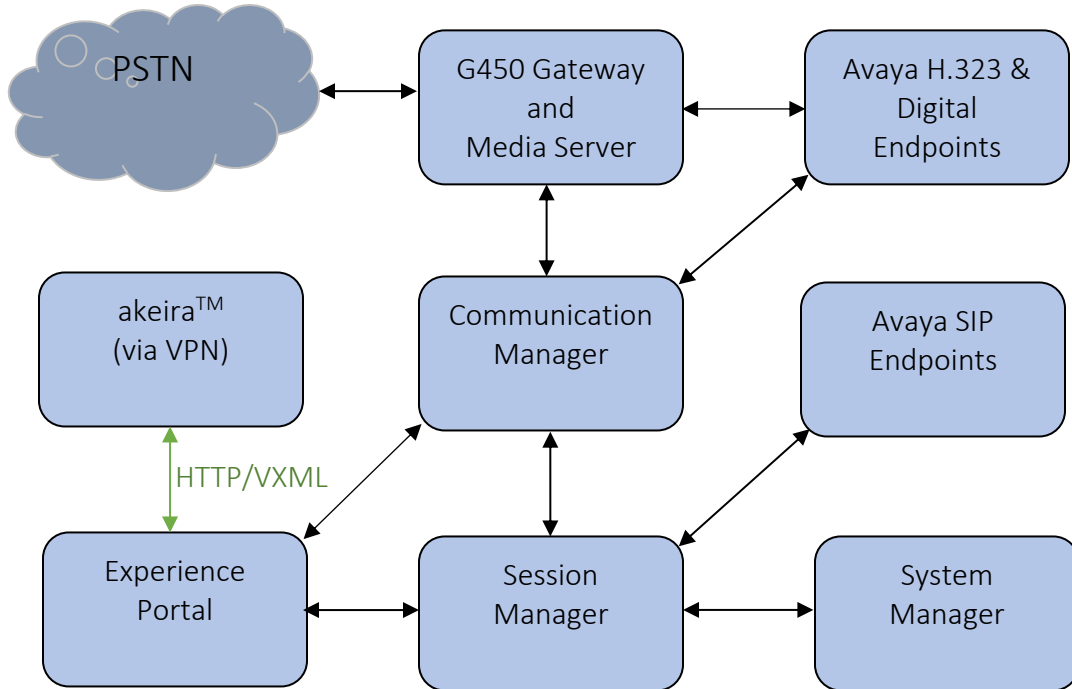


Figure 1: Test Configuration of akeira™

4. Equipment and Software Validated

The following equipment and software were used for the test configuration.

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on virtualized environment	CM 8.1.1.0.0.890.25763 (R018x.01.0.890.0)
Avaya Aura® Experience Portal running on virtualized environment	7.2.3.0.0482
Avaya Aura® Session Manager running on virtualized environment	8.1.1.0.811021
Avaya Aura® System Manager running on virtualized environment	8.1.1.0.0310504
Avaya Aura® Media Server running on virtualized environment	8.0.2.61
Avaya G450 Media Gateway	41.9.0
Avaya IP Endpoints <ul style="list-style-type: none">• 9608 (H.323)• J169 (H.323)• 9641GS (SIP)• J179 (SIP)	6.8.3 6.8.3 7.1.7.1 4.0.3.1
Avaya 9404 Digital Telephone	17.0
Desktop PC running Avaya One-X® Communicator (H.323)	6.2.14 SP14
Uniphore Software Systems, Inc. akeira™	2.0

5. Configure Avaya Aura® Experience Portal

This section describes the Experience Portal configuration to support the network shown in **Figure 1**. The configuration of Experience Portal was performed using a web browser.

The Experience Portal configuration includes the following:

- Launch Experience Portal
- Configure Speech Server
- Configure VoIP Connections
- Add akeira™ application

5.1. Launch Avaya Aura® Experience Portal

From a PC, open a web browser and enter the URL for Experience Portal. Log in with the proper credentials. The **Avaya Aura® Experience Portal Manager** page is displayed.

The screenshot shows the Avaya Aura® Experience Portal Manager web interface. The top navigation bar includes the Avaya logo, the user name 'Welcome, epadm', and the last login time 'Last logged in today at 2:29:53 PM P'. Below the navigation bar, the page title is 'Avaya Aura® Experience Portal 7.2.3 (ExperiencePortal)'. The main content area is titled 'Avaya Aura® Experience Portal Manager' and contains the following sections:

- Media Processing Platform (MPP):** Media Processing Platform (MPP) is an Avaya media processing server. When an MPP receives a call from a PBX, it invokes a VoiceXML (or CCXML) application on an application server. It then communicates with ASR and TTS servers as necessary to process the call.
- Email Service:** Email Service is an Experience Portal feature which provides e-mail capabilities.
- HTML Service:** HTML Service is an Experience Portal feature which supports web applications with HTML5 capabilities. It includes support for browser based services for mobile devices.
- Proactive Outreach Manager (POM):** Avaya Proactive Outreach Manager (POM) provides a solution for unified, multichannel, inbound and outbound architecture, with the capability to communicate through different channels of interaction, from Short Message Service (SMS) to e-mail to the traditional voice.
- SMS Service:** SMS Service is an Experience Portal feature which provides SMS capabilities.

The left sidebar contains a navigation menu with the following categories:

- ▼ **User Management**
 - Roles
 - Users
 - Login Options
- ▼ **Real-time Monitoring**
 - System Monitor
 - Active Calls
 - Port Distribution
- ▼ **System Maintenance**
 - Audit Log Viewer
 - Trace Viewer
 - Log Viewer
 - Alarm Manager
- ▼ **System Management**
 - Application Server
 - EPM Manager
 - MPP Manager
 - Software Upgrade
 - System Backup
- ▼ **System Configuration**
 - Applications
 - EPM Servers
 - MPP Servers
 - SNMP
 - Speech Servers
 - VoIP Connections
 - Zones
- ▼ **Security**
 - Certificates
 - Licensing
- ▼ **Reports**
 - Standard
 - Custom
 - Scheduled

5.2. Configure Speech Server

akeira™ uses an ASR server for speech recognition purposes. From the left pane, select **System Configuration** → **Speech Servers** → **ASR** → **Add** to an ASR server. During the compliance test, the following ASR server was configured.

Though not tested, note that, akeira also supports Google ASR as a Speech Server.

Change ASR Server

Use this page to change the configuration of an ASR server.

Name:	ASRServer
Enable:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Engine Type:	Nuance
Network Address:	10.64.101.83
Base Port:	5060
Total Number of Licensed ASR Resources:	10
New Connection per Session:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Languages	Selected Languages
af-ZA	en-US
ar-JO	
ar-WW	
as-IN	
bg-BG	
bh-IN	
bn-BD	
bn-IN	
ca-ES	
cn-HK	
MRCP	
Ping Interval:	15 seconds
Response Timeout:	4 seconds
Protocol:	MRCP V2
Enable Session XML:	<input type="radio"/> Yes <input checked="" type="radio"/> No
Transport Protocol:	TCP
Listener Port:	5060

5.3. Configure VoIP Connections

During the compliance test, akeira™ was tested using both H.323 and SIP connections to Experience Portal. H.323 connectivity is configured with Communication Manager and SIP connectivity is configured with Session Manager. The following screen captures display the configured H.323 and SIP connections.

Change H.323 Connection

Use this page to change the configuration of an H.323 connection.

Name: cm81
Enable: Yes No
Gatekeeper Address: 10.64.110.213
Alternative Gatekeeper Address:
Gatekeeper Port: 1719
Media Encryption: Yes No

New Stations

Station:	From	To
	<input type="text"/>	<input type="text"/>
Password:	<input type="text"/>	
<input checked="" type="radio"/> Same Password		
<input type="radio"/> Use sequential passwords		
Station Type:	Inbound and Outbound	
	Inbound Only	
	Maintenance	
<input type="button" value="Add"/>		

Configured Stations (M for Maintenance, I for Inbound Only)

31111 - 31113	<input type="button" value="Remove"/>
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Change SIP Connection

Use this page to change the configuration of a SIP connection.

Name: asm8

Enable: Yes No

Proxy Transport: TLS

Proxy Servers DNS SRV Domain

Address	Port	Priority	Weight	
10.64.110.212	5061	0	0	Remove

Additional Proxy Server

Listener Port: 5061

SIP Domain: avaya.com

P-Asserted-Identity:

Maximum Redirection Attempts: 0

Consultative Transfer: INVITE with REPLACES REFER

SIP Reject Response Code: ASM (503) SES (480) Custom 503

SIP Timers

T1: 250 milliseconds

T2: 2000 milliseconds

B and F: 4000 milliseconds

Call Capacity

Maximum Simultaneous Calls: 50

- All Calls can be either inbound or outbound
 Configure number of inbound and outbound calls allowed

5.4. Add akeira™ Application

From the left pane, select **System Configuration** → **Applications**. The **Applications** page is displayed (not shown). Click **Add**. Complete the fields as follows:

- Enter a descriptive name in the **Name** field. In the compliance test **Akeira** was used.
- For the **Type** field, select **VoiceXML** from the drop-down menu.
- In the **URI** box, fill in the **VoiceXML URL** field:
http://192.168.120.36:8080/AkeiraWithJwt/akeira.vxml, where **192.168.120.36** and **8080** are the IP Address and Port of the server hosting the akeira™ application. **Verify** button can be selected to verify if the application is reachable or not.
- In the **ASR Speech Servers** section, Select **Nuance** under the **ASR Engine Types** box and select the right arrow.
- In the **Application Launch** section, select the **Inbound** radio button and the **Number** radio button. Enter the **Called Number** and select **Add**.

Change Application

Use this page to change the configuration of an application.

Name: Akeira
Enable: Yes No
Type: VoiceXML
Reserved SIP Calls: None Minimum Maximum
Requested:

URI

Single Fail Over Load Balance
VoiceXML URL: **Verify**

Mutual Certificate Authentication: Yes No
Basic Authentication: Yes No

ASR Speech Servers

Engine Types: Nuance
Selected Engine Types: <None>

TTS Speech Servers

Application Launch

Inbound Inbound Default Outbound
 Number Number Range URI
Called Number: **Add**

31111
31112 **Remove**

SIP Header Source: Any

6. Configure akeira™

Please reach out to Uniphore Software Systems for akeira™ configuration as akeira™ will be configured as necessary by the Uniphore implementation team as per the customer deployment requirements.

7. Verification Steps

The following steps may be used to verify proper configuration for Experience Portal.

7.1. Verify Avaya Aura® Experience Portal

From an **Experience Portal Manager** page, click **Real Time Monitoring** → **System Monitor** in the left pane. The **System Monitor** screen is displayed, as shown below. Verify that the **Mode**, **State**, and **Config** fields of the MPP being used (mpp in the compliant test) shows **Online**, **Running**, and **OK**. Also review any alarms if they are present.

Avaya Aura® Experience Portal 7.2.3 (ExperiencePortal) Home ? Help Logoff

Expand All | Collapse All

You are here: [Home](#) > [Real-Time Monitoring](#) > [System Monitor](#)

System Monitor (Mar 2, 2020 3:31:20 PM PST)

Refresh Export

This page displays the current state of the local Experience Portal system plus any remote Experience Portal systems that you have configured. For information about the colored alarm symbols, click Help.

Summary ExperiencePortal Details

Last Poll: Mar 2, 2020 3:31:08 PM PST

Server Name	Type	Mode	State	Config	Call Capacity		Active Calls		Calls Today	Alarms	
					Current	Licensed Maximum	In	Out			
EPM	EPM	Online	Running	OK						✓	
MPP	MPP	Online	Running	OK	50	50	50	0	0	0	✓
Summary					50	50	50			0	✓

Help

To verify VoIP Connection, select **Real-time Monitoring** → **Port Distribution** → **All server**. For SIP VoIP connection, the following screen is displayed, verify the **State** is **In server**.

Avaya Aura® Experience Portal 7.2.3 (ExperiencePortal) Home ? Help Logoff

Expand All | Collapse All

You are here: [Home](#) > [Real-Time Monitoring](#) > [Port Distribution](#) > [Port Distribution Report](#)

Port Distribution Report (Mar 2, 2020 3:33:07 PM PST)

Refresh

This page displays information about how the telephony resources have been distributed to the MPPs. You configure the telephony resources on the VoIP Connections page.

Total Ports: 50 Last Poll: Mar 2, 2020 3:32:59 PM PST

Port	Mode	State	Port Group	Protocol	Current Allocation	Base Allocation
50	Online	In service	asm8	SIP_Trunk	mpp	

Help

For H.323 VoIP connection, the following screen is displayed, verify the **State** of all ports is **In server**.

The screenshot shows the Avaya Aura Experience Portal 7.2.3 interface. The breadcrumb trail is: Home > Real-Time Monitoring > Port Distribution > Port Distribution Report. The page title is "Port Distribution Report (Mar 2, 2020 3:34:20 PM PST)". A description states: "This page displays information about how the telephony resources have been distributed to the MPPs. You configure the telephony resources on the VoIP Connections page." The report shows "Total Ports: 3" and "Last Poll: Mar 2, 2020 3:34:14 PM PST".

Port	Mode	State	Port Group	Protocol	Current Allocation	Base Allocation
31111	Online	In service	cm81	H323	mpp	
31112	Online	In service	cm81	H323	mpp	
31113	Online	In service	cm81	H323	mpp	

A "Help" button is located below the table.

8. Conclusion

Uniphore Software Systems, Inc. akeira™ successfully completed compliance testing. These Application Notes describe the procedures required to configure Uniphore Software Systems, Inc. akeira™ to interoperate with Avaya Aura® Experience Portal to support the reference configuration shown in **Figure 1**.

9. Additional References

The following Avaya product documentation can be found at <http://support.avaya.com>

[1] *Administering Avaya Aura® Experience Portal*, Release 7.2.3, Issue 1, September 2019.

The akeira™ product information can be found at <https://www.uniphore.com/solution/akeira/>

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