



Avaya Solution & Interoperability Test Lab

Application Notes for INI Interactive Speech Attendant Version 2.0 with Avaya Aura® Experience Portal Release 8.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the INI Interactive Speech Attendant with Avaya Aura® Experience Portal. INI Interactive Speech Attendant is a speech-enabled dynamic menu and name dialer application for 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 any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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

1. Introduction

These Application Notes describe the configuration steps required to integrate the INI Interactive Speech Attendant with Avaya Aura® Experience Portal. INI Interactive Speech Attendant (hereafter referred to as INI ISA) allows administrators to define speech-enabled menus to handle any type of self-service routing scenario. With configuration settings for business hour schedules, alert messages, transfer destinations, and more, INI ISA simplifies development of full-featured speech and touchtone IVR applications. The included verification tools validate call flows and prompt recordings, ensuring an error-free deployment.

When linked to an LDAP directory, INI ISA applications also provide callers the ability to speak the name of the person they wish to reach or enter the extension. INI ISA integrates to common LDAP sources (such as Microsoft Active Directory) and includes tools to launch and schedule automated directory imports, edit user aliases, and define name confirmation strategies.

The intuitive, efficient user experience delivered by INI ISA promotes higher customer satisfaction and better corporate branding, while providing the flexibility that organizations demand.

2. General Test Approach and Test Results

This section describes the interoperability compliance testing used to verify the INI Interactive Speech Attendant application with Experience Portal. If the testing was successfully concluded but it was necessary to implement workarounds or certain non-critical features did not work, it should be noted in **Section 2.2**.

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 this Application Note, the interface between Avaya systems and the INI Interactive Speech Attendant did not include the use of any specific encryption features.

2.1. Interoperability Compliance Testing

Interoperability compliance testing included feature and serviceability testing. The feature testing focused on the following functionality:

- Interact with the sample application to configure menus and exercise all the possible paths of the application trees.
- Use DTMF and Automatic Speech Recognition (ASR) from endpoint to access the same application with all the same paths and verify that the user experience is the same between the two approaches.
- Along the application tree, enter invalid values and verify that the responses from the two approaches are the same.

The serviceability testing focused on verifying the ability of INI Interactive Speech Attendant and Experience Portal to recover from adverse conditions, such as power failures and disconnecting cables to the IP network.

2.2. Test Results

All test cases passed. Experience Portal was successful in running INI Interactive Speech Attendant.

2.3. Support

To obtain technical support for INI Interactive Speech Attendant, contact Interactive Northwest via web, email or phone.

- Web: <https://www.interactivenw.com/company/support/>
- Email: support@interactivenw.com
- Phone: (800) 808-8090, say “Support”.

3. Reference Configuration

Figure 1 illustrates the configuration used for testing. In this configuration, Avaya Experience Portal interfaces with Avaya Aura® Session Manager via SIP. INI Interactive Speech Attendant server was connected on the same LAN.

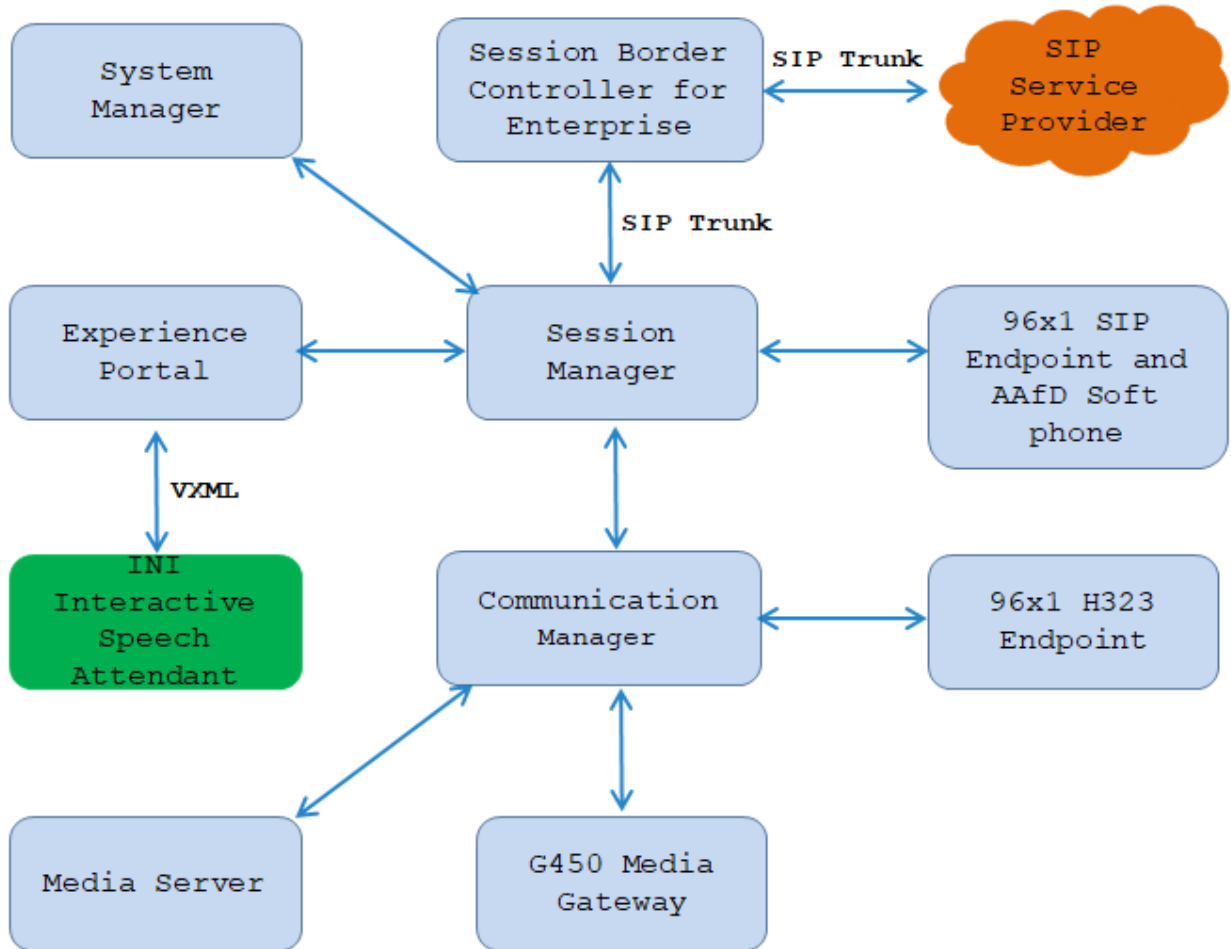


Figure 1: Test Configuration Diagram

The following table indicates the IP addresses that were assigned to the systems in the test configuration diagram:

Description	IP Address
System Manager	10.33.1.40
Session Manager	10.33.1.42
Communication Manager	10.33.1.43
Experience Portal	10.33.1.47
ASR and TTS Server	10.33.1.61
Media Server	10.33.1.44
G450 Media Gateway	10.33.1.8
H.323 Endpoints	10.33.5.10-11
SIP Endpoints	10.33.5.12-14
INI Interactive Speech Attendant Server	10.33.1.60

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager running on virtualized environment	10.1 10.1.0.1.0.974.27372
Avaya Aura® Application Enablement Services running on virtualized environment	10.1 10.1.0.0.0.11
Avaya Aura® Session Manager running on virtualized environment	10.1 10.1.0.0.1010019
Avaya Aura® System Manager running on virtualized environment	10.1 10.1.0.0.0614119
Avaya Aura® Media Server running on virtualized environment	8.0 8.0.2.163
Avaya Aura® Experience Portal running on virtualized environment	8.1.1 8.1.1.0.0121
Avaya Session Border Controller for Enterprise	8.1.3
Avaya G450 Media Gateway	42.07.0
Avaya IP Deskphones <ul style="list-style-type: none"> • 9621 (H.323) • 9641GS (SIP) • J189 (SIP) 	6.8.304 7.1.9.0.8 4.0.7.1.5
Desktop PC running Avaya Agent for Desktop (H.323 and SIP)	2.0.6.0.10
INI Interactive Speech Attendant running on RHEL Release 7.9	2.0

5. Configure Avaya Aura® Experience Portal

This section covers the administration of Experience Portal. The following Experience Portal configuration steps will be covered:

- Configuring INI Interactive Speech Attendant Applications
- Starting the MPP server

Experience Portal is configured via the Experience Portal Management (EPM) web interface. To access the web interface, enter `http://<ip-addr>/` as the URL in an internet browser, where `<ip-addr>` is the IP address of the EPM. Log in using the Administrator user role.

The screen shown below is displayed.

Note: All of the screens in this section are shown after the Experience Portal had been configured. Don't forget to save the screen parameters as you configure Experience Portal.

The screenshot displays the Avaya Experience Portal Manager (EPM) web interface. At the top left is the Avaya logo. On the top right, it says "Welcome, admin" and "Last logged in yesterday at 11:13:03 AM MDT". Below this is a red navigation bar with "Avaya Experience Portal 8.1.1 (ExperiencePortal)", "Home", "Help", and "Logoff" links. A left sidebar contains a tree view of navigation options: 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), and Reports (Standard). The main content area shows "You are here: Home" and the title "Avaya Experience Portal Manager". Below the title is a paragraph: "Avaya Experience Portal Manager (EPM) is the consolidated web-based application for administering Experience Portal. Through the EPM interface you can configure Experience Portal, check the status of an Experience Portal component, and generate reports related to system operation." This is followed by a section titled "Installed Components" with four sub-sections: "Media Processing Platform" (describing MPP as a media processing server), "Email Service" (describing it as a feature for e-mail capabilities), "HTML Service" (describing it as a feature for HTML5 capabilities), and "SMS Service" (describing it as a feature for SMS capabilities). At the bottom of the main content area is a "Legal Notice" section.

In the **Applications** page, add an Experience Portal application to handle incoming calls. Navigate to **System Configuration** → **Applications** → **Add**. The screen capture below shows the sample application that was used during compliance testing. The application name “**ISA_FAQ_Demo**” should be matched with the name of INI application and the **VoiceXML URL** was entered with the format as shown below https://iniserver.bvwdev.com:8844/speech_attendant/start.jsp. Click on **Verify** button, the URL link must be working and the file start.jsp is successfully downloaded.

The screenshot shows the 'Change Application' configuration page in the Experience Portal. The page title is 'Change Application' and the breadcrumb is 'You are here: Home > System Configuration > Applications > Change Application'. The application name is 'ISA_FAQ_Demo'. The 'Enable' checkbox is checked (Yes). The 'Type' is set to 'VoiceXML'. The 'Reserved SIP Calls' are set to 'None'. The 'Requested' field is empty. The 'URI' section has 'Single' selected. The 'VoiceXML URL' is 'https://iniserver.bvwdev.com:8844/speech_attendant/start.jsp' and a 'Verify' button is present. 'Mutual Certificate Authentication' and 'Basic Authentication' are both set to 'No'. The 'ASR Speech Servers' section shows 'ASR' with 'Engine Types' set to '<None>' and 'Selected Engine Types' set to 'Nuance'. The 'Nuance' section shows 'Languages' set to '<None>' and 'Selected Languages' set to 'English(USA) en-US'. The 'Resources' dropdown is set to 'Acquire on call start and retain'. 'N Best List Length' is empty. 'Speech Complete Timeout' and 'Speech Incomplete Timeout' are both empty.

In the **Application Launch** of the sample application, add a called number 4806, this number will be used in the DNIS number of the INI application.

TTS Speech Servers ▾
TTS: No TTS ▾

Application Launch ▾

Inbound Inbound Default Outbound

Number Number Range URI

Called Number: **Add**

Remove

SIP Header Source: Any ▾

Speech Parameters ▸

Reporting Parameters ▸

Advanced Parameters ▸

Save **Apply** **Cancel** **Help**

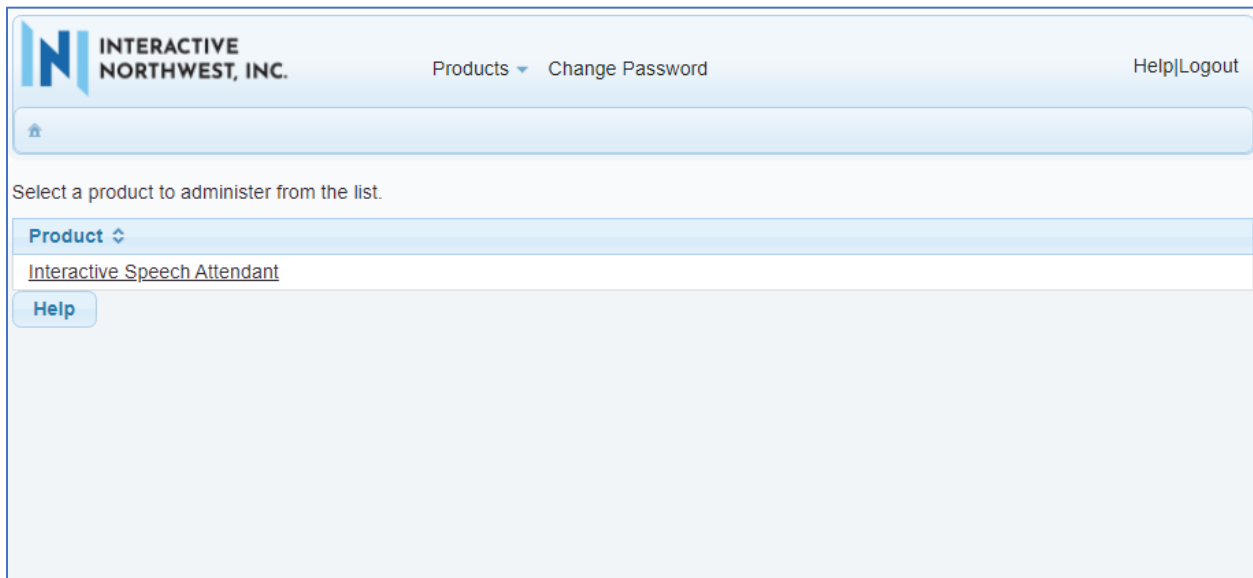
6. Configure INI Interactive Speech Attendant

To access the web interface for INI Interactive Speech Attendant, enters <http://<ip-addr>> or FQDN/ as the URL in an internet browser, where <ip-addr> is the IP address of the INI Interactive Speech Attendant application server. Log in using appropriate credentials.



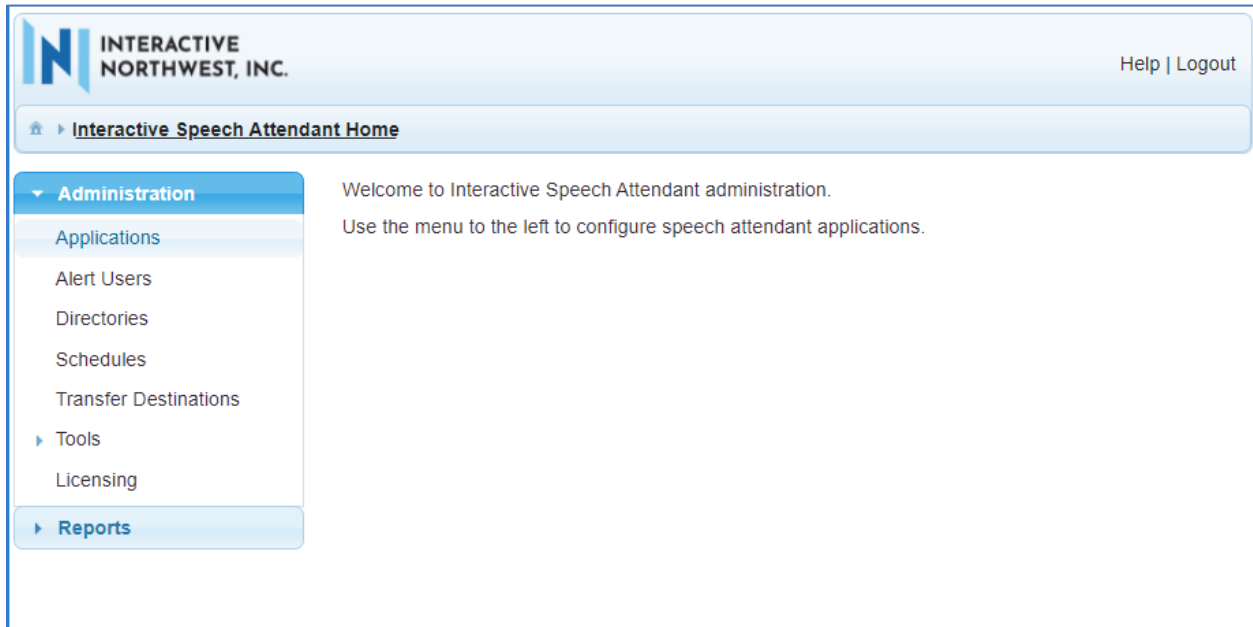
The screenshot shows a web browser window with the address bar displaying <https://iniserver.bvwdev.com/cas/login?service=htt...>. The page features the INI Interactive Northwest, Inc. logo at the top center. Below the logo, there are two input fields: one for 'Username:' and one for 'Password:'. A 'LOGIN' button is positioned below the password field. At the bottom of the page, a copyright notice reads: 'Copyright © 2012-2020 Interactive Northwest, Inc. All rights reserved.'

From the home page, select **Interactive Speech Attendant** link.

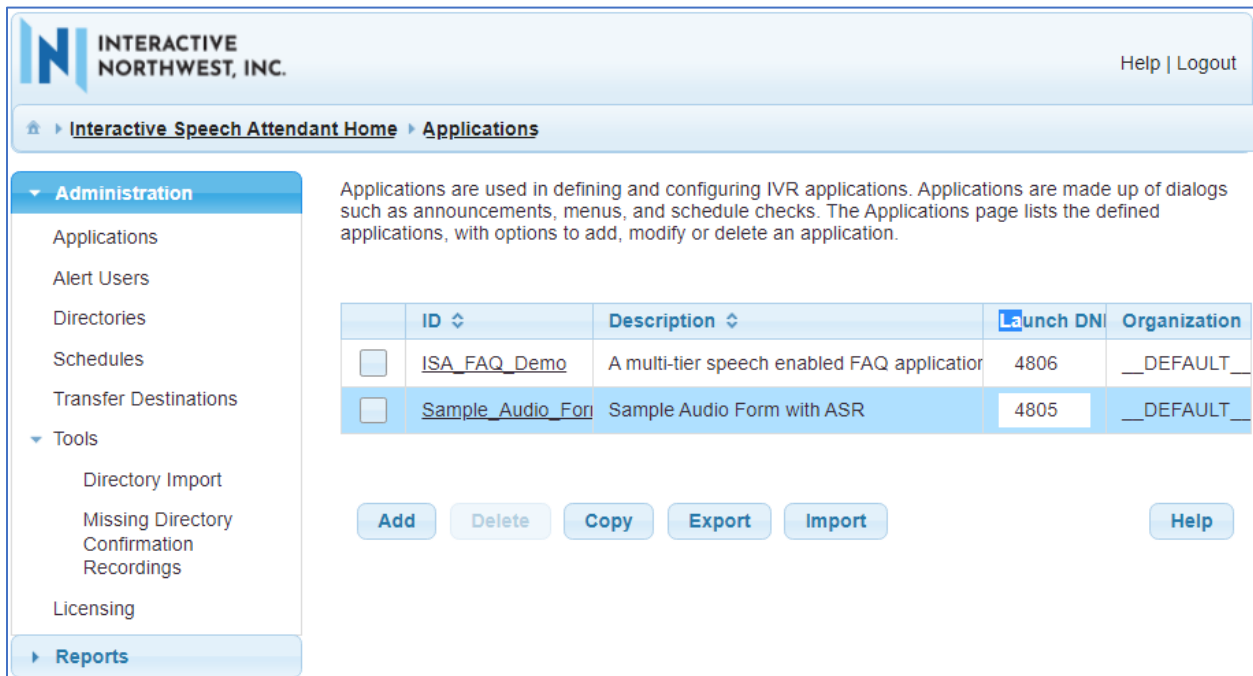


The screenshot shows the INI Interactive Northwest, Inc. home page. The header includes the company logo, 'Products' with a dropdown arrow, 'Change Password', and 'Help|Logout'. Below the header, there is a navigation bar with a home icon. The main content area contains the text 'Select a product to administer from the list.' followed by a 'Product' dropdown menu. The dropdown menu is open, showing 'Interactive Speech Attendant' as the selected option. A 'Help' button is located below the dropdown menu.

Select **Applications** in the **Administration** menu.



The “**ISA_FAQ_Demo**” application was created by default in the INI Interactive Speech Attendant. This application was used in the Experience Portal application created in the **Section 5** above.



Click on the “ISA_FAQ_Demo” form, the **ISA_FAQ_Demo** is shown as below. In the **ID** field make sure the ID is matched with the ID configured in the Experience Portal application in **Section 5**. In the **Application Properties** section, check on the **Enable ASR?** checkbox and select its language respectively if ASR is used for the menu and keep other fields at default values.

Click on **Save** button at the bottom of the page.

The screenshot shows the configuration page for the 'ISA_FAQ_Demo' application. The page header includes the logo for 'INTERACTIVE NORTHWEST, INC.' and a 'Help | Logout' link. The breadcrumb trail is 'Interactive Speech Attendant Home > Applications > Update Application (ISA_FAQ_Demo)'. A left-hand navigation menu is visible with categories: Administration (Applications, Alert Users, Directories, Schedules, Transfer Destinations, Tools, Licensing) and Reports. The main content area contains a header instruction: 'Use this page to change the application configuration and click Save or Apply to validate. If validation fails, correct any errors and re-upload any selected phrase files.' Below this are several form fields: Organization (set to '__DEFAULT__'), ID * (set to 'ISA_FAQ_Demo'), and Description * (set to 'A multi-tier speech enabled FAQ application using ISA' with a 203-character limit). The 'Application Properties' section includes: Recording DTMF Code * (9999), Start Dialog * (faq_greeting), TTS Language/Voice * (en-US Jackie F), Enable ASR? (checked), and ASR Language * (en-US). At the bottom of the form is a 'Launch DNIS List' section.

In the **Launch DNIS List** section, add a number that will launch the application. The DNIS number should be matched with the number configured in the application form in **Section 5**.

The screenshot shows the 'Launch DNIS List' section. It features a table with a header row containing a dropdown arrow and the text 'Launch DNIS'. Below the header, there is one row with a checkbox and the number '4806'. At the bottom of the section are two buttons: 'Add' and 'Delete'.

7. Verification Steps

This section provides the verification steps that may be performed to verify that Experience Portal can run INI Interactive Speech Attendant applications.

1. From the EPM web interface, verify that the MPP server is online and running in the **System Monitor** page shown below.

System Monitor (May 18, 2022 9:51:13 AM MDT)

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: May 18, 2022 9:51:06 AM MDT

Server Name	Type	Mode	State	Config	Call Capacity			Active Calls		Calls Today	Alarms
					Current	Licensed	Maximum	In	Out		
EPM / EP81	EPM/MPP	Online	Running	OK	10	10	20	0	0	0	
Summary					10	10	20			0	

[Help](#)

2. From the EPM web interface, verify that the ports on the MPP server are in-service in the **Port Distribution** page shown below.

Port Distribution Report (May 18, 2022 9:58:05 AM MDT)

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: 10 | Last Poll: May 18, 2022 9:57:49 AM MDT

Port	Mode	State	Port Group	Protocol	Current Allocation	Base Allocation
10	Online	In service	SM10	SIP_Trunk	EP81	

[Help](#)

- Place calls to the INI Interactive Speech Attendant application to verify the questions are as configured in the **ISA_FAQ_Demo** application. Verify the menu selection by navigating to **Reports → Activity Reports → Dialog Activity**.

The screenshot shows the INI Interactive Northwest, Inc. web application interface. The breadcrumb trail at the top reads: **Interactive Speech Attendant Home** > **Dialog Activity Filter** > **Dialog Activity**. The left navigation menu is expanded to **Reports**, with sub-items: Directories Overview, Audit, Activity Reports (selected), Application Activity, Application Trending, Dialog Activity, Dialog Trending, Dialog Selection, and Diagnostic Reports. The main content area displays the Dialog Activity Report for May-2022, showing call traffic by dialog name. The report includes the following table:

Dialog	Total Count
faq_tier_1	27
faq_greeting	12
faq_transfer	10
faq_business_hrs	6
faq_reentry	6
max_tries_exceeded	2

Additional details shown in the interface include: Time Period: 05/01/22 - 06/01/22, Application: ISA_FAQ_Demo, Dialog: ALL, and Summarized By: Month. At the bottom of the report area, there are buttons for **Export PDF**, **Export XLS**, **Cancel**, and **Help**.

8. Conclusion

These Application Notes describe the configuration steps required to integrate the INI Interactive Speech Attendant application with Avaya Aura® Experience Portal. All feature and serviceability test cases were completed successfully.

9. Additional References

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

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

- [1] Administering Avaya Aura® Communication Manager, Release 10.1, Issue 1, December 2021.
- [2] Administering Avaya Aura® Session Manager, Release 10.1, Issue 1, April 2021.
- [3] Administering Avaya Experience Portal, Release 8.1.1, Issue 2, February 2022.

Product documentation for INI Interactive Speech Attendant may be found at <https://www.interactivenw.com/products/interactive-speech-attendant/>

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