



Avaya Solution & Interoperability Test Lab

Application Notes for INI FormStudio™ with Avaya Aura® Experience Portal – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate the INI FormStudio™ with Avaya Aura® Experience Portal. INI FormStudio™ is an automated form 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 FormStudio™ with Avaya Aura® Experience Portal. INI FormStudio is an automated form application for Avaya Aura® Experience Portal that simplifies data collection while making it easy for respondents to fill out reports, surveys and other types of forms. INI FormStudio allows an organization to automate the process of gathering information and frees up staff to focus on higher level activities.

INI FormStudio provides an easy to use web-based interface for a user to add, delete, or modify questions and forms. In addition to adding forms with questions to get information from the caller, there is also a web-based interface for viewing, transcribing and downloading the form results.

Typical use cases for INI FormStudio include customer satisfaction surveys, address collection, status report collection, incident reports, claim submittals, and many others. The real benefit is the ease of use for the user to add, modify or delete forms and questions on their own.

2. General Test Approach and Test Results

This section describes the interoperability compliance testing used to verify the INI FormStudio application with Experience Portal.

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 FormStudio 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:

- From a web browser on a PC, enter the URL that is associated with INI FormStudio sample application.
- Interact with the sample application to configure a form and exercise all the possible paths of the application tree.
- 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 FormStudio 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 FormStudio.

2.3. Support

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

- Web: <http://www.interactivenw.com/support.php>
- 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 can interface with either Avaya Aura® Communication Manager via H.323 or Session Manager via SIP. The INI FormStudio server was connected on the same LAN.

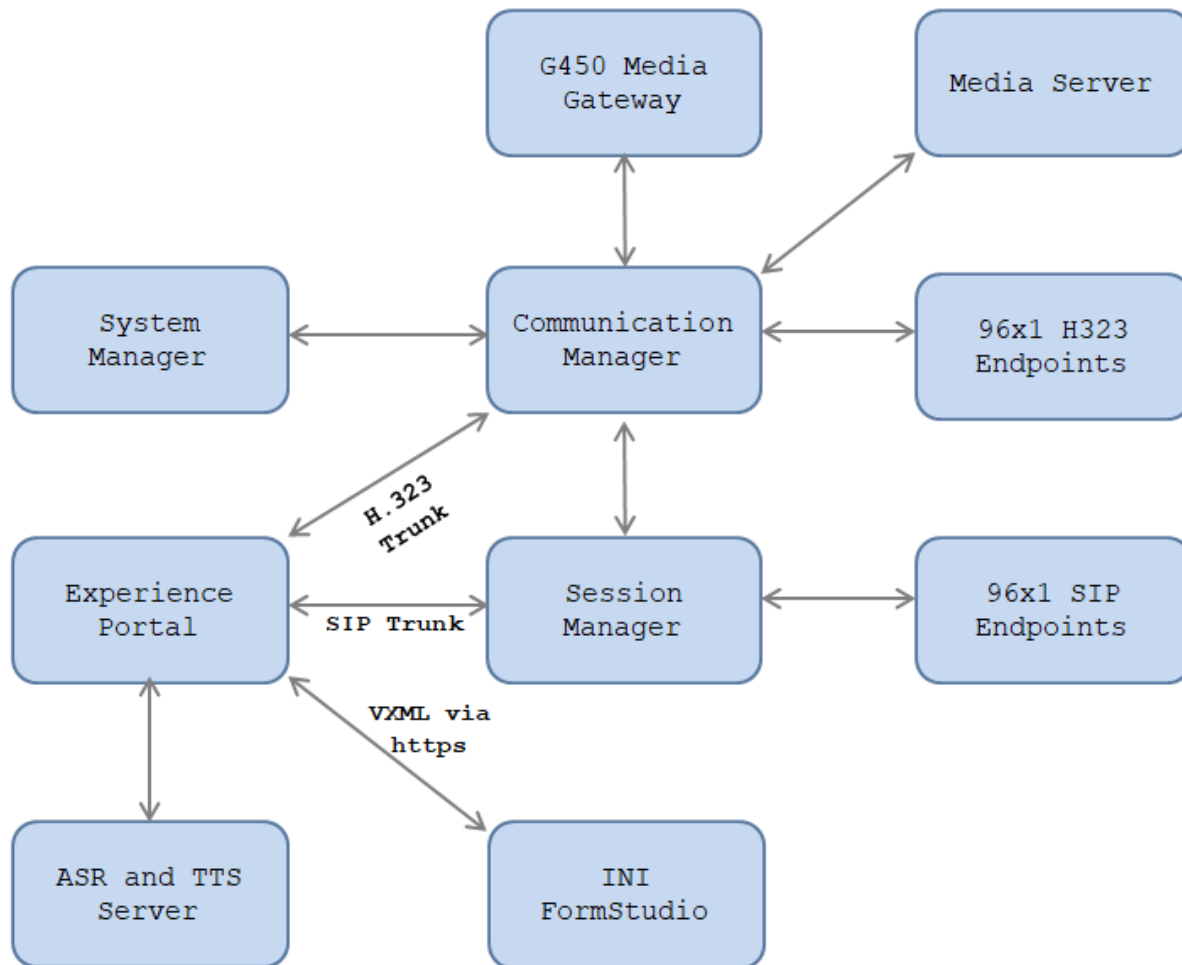


Figure 1: Test Configuration Diagram

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

Description	IP Address
System Manager	10.33.1.10
Session Manager	10.33.1.11
Communication Manager	10.33.1.6
Experience Portal	10.33.1.3
ASR and TTS Server	10.33.1.61
Media Server	10.33.1.30
G450 Media Gateway	10.33.1.8
H.323 Endpoints	10.33.5.10-11
SIP Endpoints	10.33.5.12-14
INI FormStudio Server	10.33.100.50

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Experience Portal	7.2.2 Patch 2118
Avaya Aura® Communication Manager running on Virtualized Environment	8.1.0.1.1 (01.0.890.0-25442)
Avaya Aura® System Manager running on Virtualized Environment	8.1.0.0 (8.1.0.0.810007)
Avaya Aura® Session Manager running on Virtualized Environment	8.1.0.0 Build No. 8.1.0.0.733078 Software Update Rev. No. 8.1.0.0.079814
Avaya Aura® Media Server running on Virtualized Environment	8.0.1.121_2019.04.29
Avaya G450 Media Gateway	41.9.0
Avaya 96x1 IP Deskphones	H.323 6.8 SIP 7.1.5
INI FormStudio	4.0.2

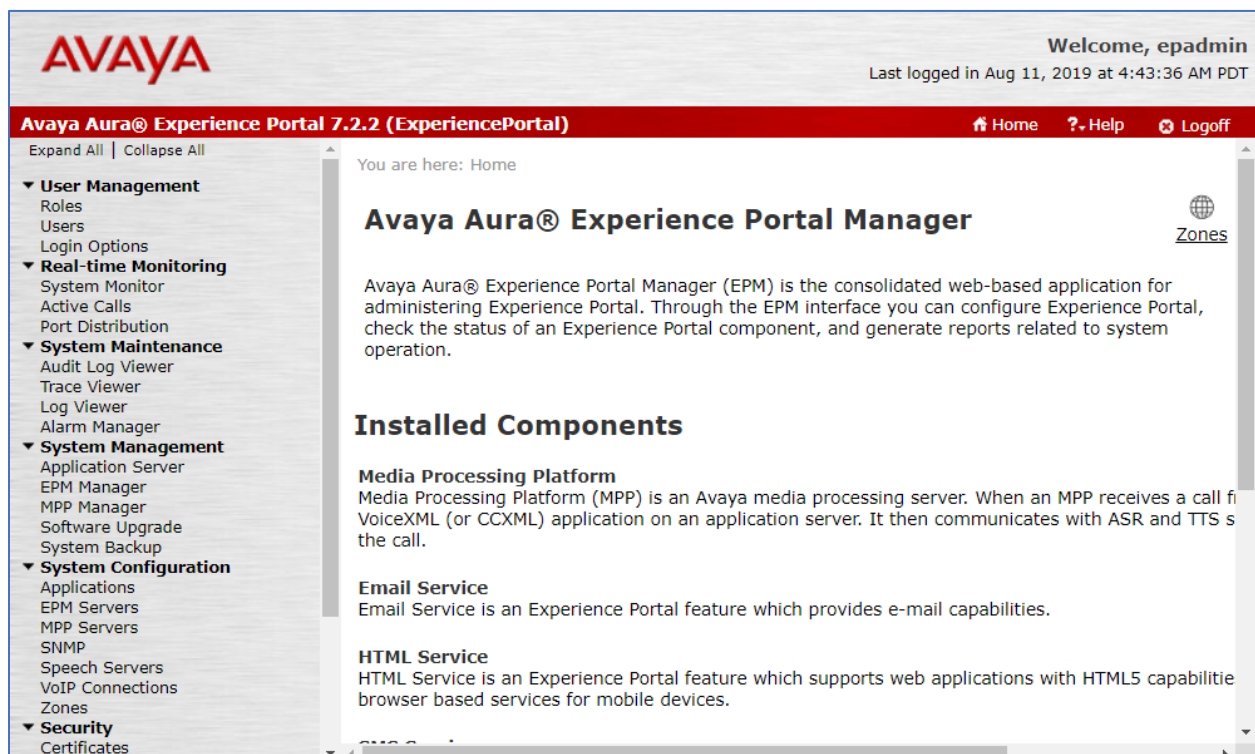
5. Configure Avaya Aura® Experience Portal

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

- Configuring INI FormStudio Applications

Avaya Aura® 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 Experience Portal had been configured. Don't forget to save the screen parameters as you configure Experience Portal.



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 configuration that was used during compliance testing.

You are here: [Home](#) > [System Configuration](#) > [Applications](#) > Change Application

Change Application

Use this page to change the configuration of an application.

Zone: Default
Name: FormStudio_VXML
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

Speech Servers

ASR: Nuance

Languages
<None>

Selected Languages
English(USA) en-US

TTS: No TTS

Application Launch

☒ Inbound ☐ Inbound Default ☐ Outbound
☒ Number ☐ Number Range ☐ URI

Called Number: **Add**

Remove

Speech Parameters ▶
Reporting Parameters ▶
Advanced Parameters ▶

Once the application is added, return to the list of applications and select the pencil icon at the far right to edit the **Configurable Application Variables**.

You are here: [Home](#) > System Configuration > Applications

Applications

This page displays the applications that are currently deployed on the Experience Portal system.

	Zone	Name	Enable	Type	URI	Launch	ASR	TTS	Requested SIP Calls	Configurable Application Variables
<input type="checkbox"/>	Default	FormStudio_VXML	Yes	VoiceXML	https://iniserver.bvwdev.com:8844/INIFormStudio/Start	3325	English(USA) en-US	No TTS	None	
<input type="checkbox"/>	Default	INI_VXML	Yes	VoiceXML	https://iniserver.bvwdev.com:8844/INIFormStudio/Start	4801	English(USA) en-US	No TTS	None	
<input type="checkbox"/>	Default	Test1_CCXML	Yes	CCXML	https://10.33.1.3/mpp/misc/avptestapp/root.ccxml	4802	English(USA) en-US	English(USA) en-US Nathan M	None	
<input type="checkbox"/>	Default	Test_CCXML	Yes	CCXML	https://10.33.1.3/mpp/misc/avptestapp/root.ccxml	3326	English(USA) en-US	English(USA) en-US Zoe F	None	
<input type="checkbox"/>	Default	Test_VoiceXML	Yes	VoiceXML	https://10.33.1.3/mpp/misc/avptestapp/intro.vxml	4800	English(USA) en-US	English(USA) en-US Allison F	None	

[Add](#) [Delete](#) [Clear MPP Cache](#) [Global CAVs](#) [Help](#)

In the **Form ID** field, type the INI FormStudio ID. In this test “SampleForm” was used. Make sure this ID exists in INI FormStudio (see Section 6).

AVAYA Welcome, epadmin
Last logged in Aug 11, 2019 at 4:43:36 AM PDT

Avaya Aura® Experience Portal 7.2.2 (ExperiencePortal) [Home](#) [Help](#) [Logoff](#)

You are here: [Home](#) > System Configuration > [Applications](#) > Change INI_VXML Configurable Application Variables

Change INI_VXML Configurable Application Variables

Use this page to change the values of the configurable application variables, defined in the applications that are deployed on the Experience Portal system.

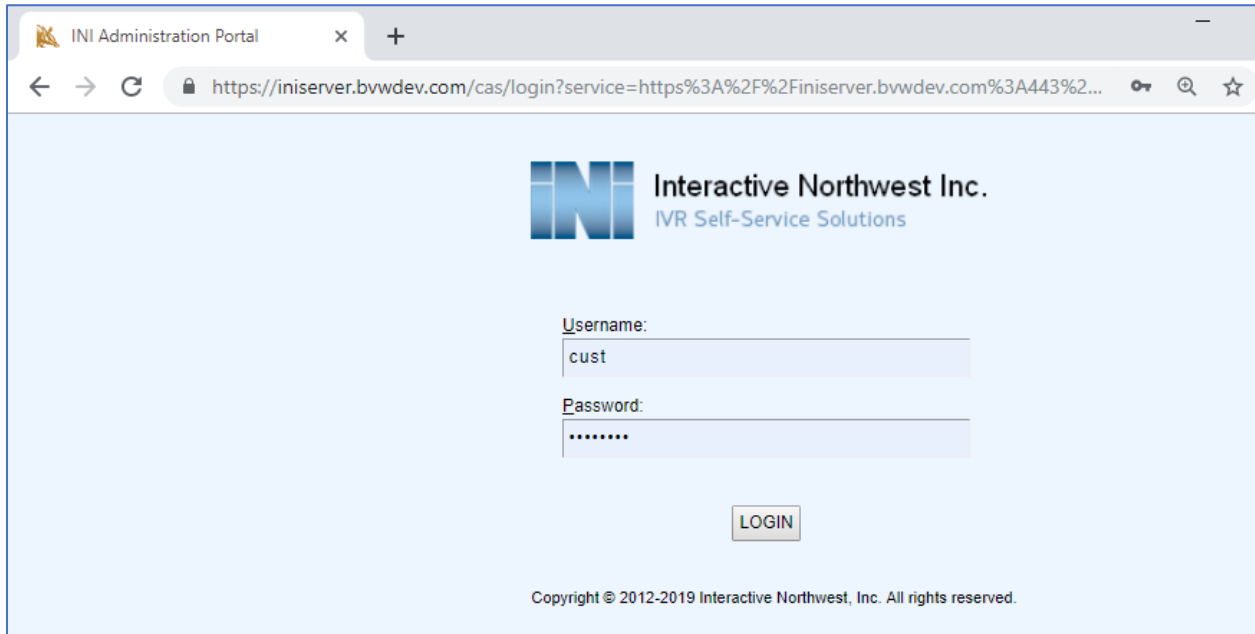
Zones: Default [Reset All to Default](#)

Form ID:

[Save](#) [Apply](#) [Cancel](#) [Help](#)

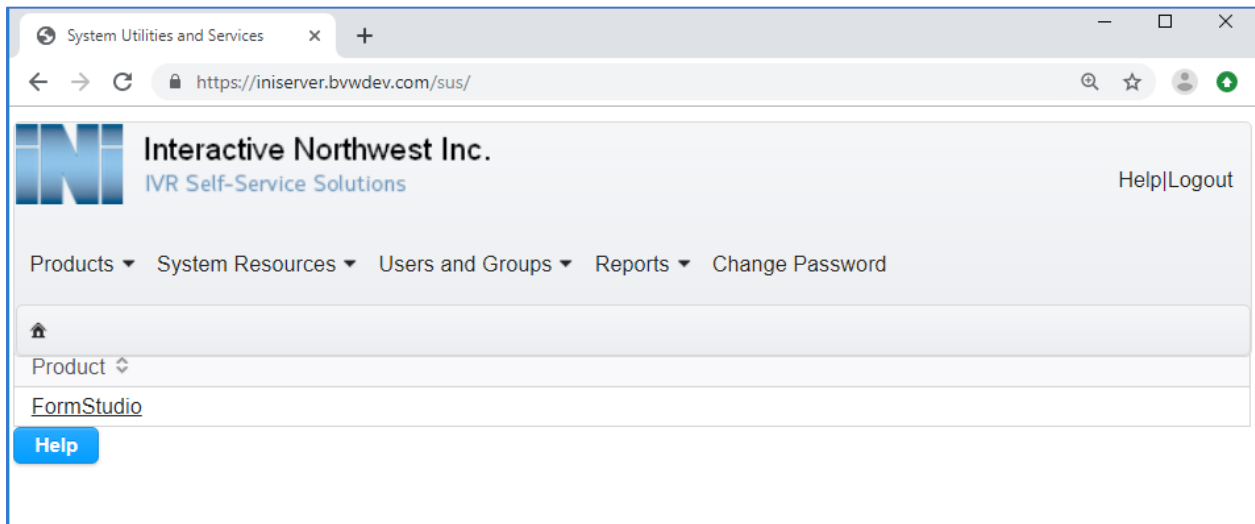
6. Configure INI FormStudio

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



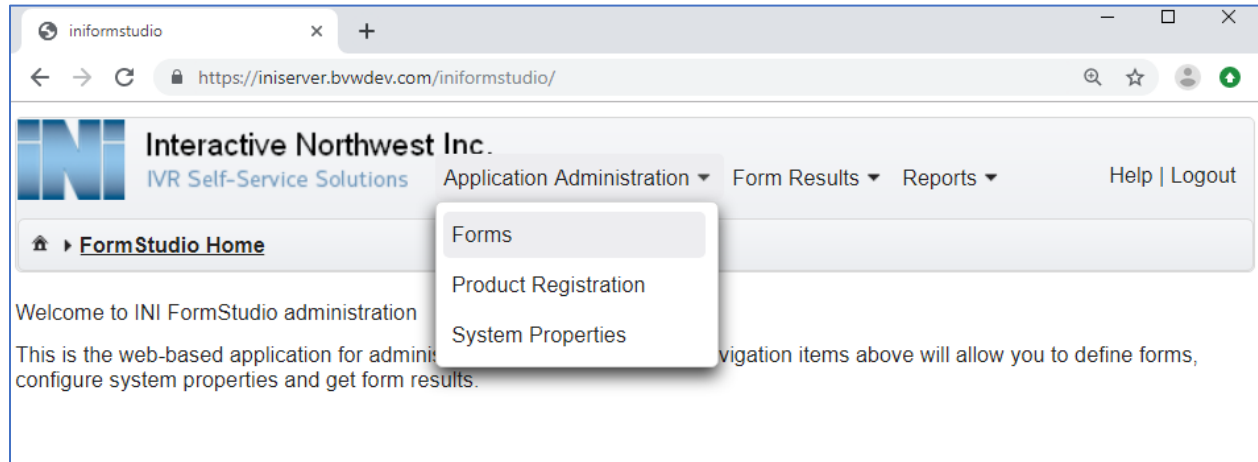
The screenshot shows a web browser window with the title "INI Administration Portal". The address bar displays the URL: <https://iniserver.bvwdev.com/cas/login?service=https%3A%2F%2Finiserver.bvwdev.com%3A443%2F...>. The main content area features the INI logo and the text "Interactive Northwest Inc. IVR Self-Service Solutions". Below this, there are two input fields: "Username:" with the value "cust" and "Password:" with masked characters "*****". A "LOGIN" button is positioned below the password field. At the bottom, a copyright notice reads: "Copyright © 2012-2019 Interactive Northwest, Inc. All rights reserved."

From the home page, select **FormStudio** link.

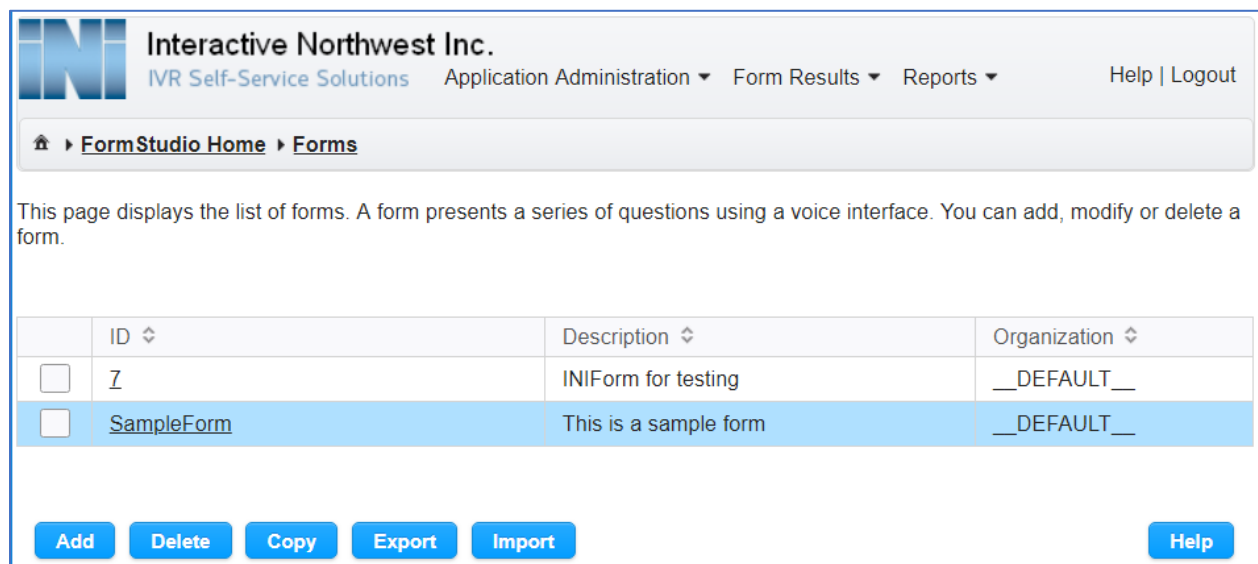


The screenshot shows a web browser window with the title "System Utilities and Services". The address bar displays the URL: <https://iniserver.bvwdev.com/sus/>. The main content area features the INI logo and the text "Interactive Northwest Inc. IVR Self-Service Solutions". In the top right corner, there is a "Help|Logout" link. Below the header, there is a navigation menu with the following items: "Products", "System Resources", "Users and Groups", "Reports", and "Change Password". A search bar is located below the menu, with a "Product" dropdown menu. The "FormStudio" link is selected in the dropdown. A "Help" button is located below the search bar.

Select **Forms** in the **Application Administration**.



The “**SampleForm**” form was created by default in the INI FormStudio. This form was used in the Experience Portal application created in the **Section 5** above.



Click on the “**SampleForm**” form, the **SampleForm** is shown below. In the **ID** field, make sure the ID matches the ID configured in the Experience Portal application in **Section 5**. In the **Data Collection** section, check on the **Allow Collection by ASR?** checkbox and select the vendor respectively, if ASR is used for the form, and keep other fields at default values.

Click on **Save** button at the bottom of the page to save changes.

The screenshot displays the 'FormStudio Home' interface for 'Interactive Northwest Inc. IVR Self-Service Solutions'. The breadcrumb trail indicates the current page is 'Update Form (SampleForm)'. The main content area is titled 'Use this page to change the form configuration.' and contains several form fields:

- Organization:** __DEFAULT__
- ID:** SampleForm (This field is highlighted with a red rectangular border)
- Description:** This is a sample form (235 characters remaining)
- Language:** English-Male (dropdown menu)

Below these fields is a section titled 'Data Collection' with the following settings:

Setting	Value
Allow Collection by ASR?	<input checked="" type="checkbox"/>
ASR Vendor	Nuance (dropdown menu)
Collect ANI?	<input checked="" type="checkbox"/>
Collect DNIS?	<input checked="" type="checkbox"/>
Collect Session Data?	<input type="checkbox"/>
Allow Goto Questions?	<input checked="" type="checkbox"/>
Collect POM Data?	<input type="checkbox"/>

7. Verification Steps

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

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

Avaya Aura® Experience Portal 7.2.2 (ExperiencePortal)

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

System Monitor (Aug 14, 2019 4:43:19 AM PDT)

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.

Refresh Zones Export

Summary ExperiencePortal Details

Last Poll: Aug 14, 2019 4:43:10 AM PDT

Zone	Server Name	Type	Mode	State	Config	Call Capacity			Active Calls		Calls Today	Alarms
						Current	Licensed	Maximum	In	Out		
Default	EPM / aep72	EPM/MPP	Online	Running	OK	15	15	15	0	0	1	
Summary						15	15	15				

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.

Avaya Aura® Experience Portal 7.2.2 (ExperiencePortal)

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

Port Distribution Report (Aug 14, 2019 4:44:23 AM PDT)

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.

Refresh

Zone: Default

Total Ports: 15

Last Poll: Aug 14, 2019 4:44:17 AM PDT

Port	Mode	State	Port Group	Protocol	Current Allocation	Base Allocation
3325	Online	In service	interopcm	H323	aep72	
3326	Online	In service	interopcm	H323	aep72	
3327	Online	In service	interopcm	H323	aep72	
3328	Online	In service	interopcm	H323	aep72	
3329	Online	In service	interopcm	H323	aep72	
10	Online	In service	SM81	SIP_Trunk	aep72	

Help

- Place calls to the INI FormStudio application to verify the questions are as configured in the **SampleForm** form. To verify the form results, navigate to **Form Results** → **Transcription**.

The screenshot displays the INI FormStudio application interface. At the top, the header includes the INI logo, the text 'Interactive Northwest Inc. IVR Self-Service Solutions', and navigation links for 'Application Administration', 'Form Results', and 'Reports'. A 'Help | Logout' link is also present. Below the header, a breadcrumb trail shows the path: 'FormStudio Home' > 'Transcription' > 'Transcribe Record (Form: SampleForm)'. The main content area is titled 'Use this page to transcribe a form result record'. It displays form metadata: ID (cf08c150-e5d5-44d9-816d-ebfa804f5779), Timestamp (08/11/19 10:09:26), and Transcriber (cust). A table lists the form questions and their responses. The table has three columns: 'Question', 'Response Text', and 'Recording'. The questions include a satisfaction rating, account number, telephone number, SSN, birth date, a call back preference, and time formats. Below the table, there is a section for 'Add additional comments' with a 'Retake the form' button. At the bottom, there are fields for 'UCID', 'ANI', and 'DNIS', and a 'Mark for Review' checkbox.

Question	Response Text	Recording
Satisfaction Rating on a scale of 1 to 5	Highly Satisfied	
4-5 digit Account Number	14789	
10-digit Telephone Number	613-967-5089	
9-digit SSN	123456789	
Birth Date	01-01-2000	
Does the caller want a call back?	yes	
Time in 12 Hour Format	11:30	
Time in 24 Hour Format	11:00	

Add additional comments

Retake the form No

UCID 10001000001565524667

ANI 4603

DNIS 4801

Mark for Review: ☐

8. Conclusion

These Application Notes describe the configuration steps required to integrate the INI FormStudio 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.

- [1] Administering Avaya Aura® Experience Portal, Release 7.2.2, Issue 1, March 2019
- [2] Administering Avaya Aura® Communication Manager, Release 8.1.x, Issue 2, July 2019
- [3] Audio Forms Administration User Guide, December 2019
- [4] Audio Forms Results Guide, December 2019

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