



Avaya Solution & Interoperability Test Lab

Application Notes for Configuring Computer Instruments Experience Configuration Integration VoiceXML Application (eCI), with Avaya Voice Portal – Issue 1.0

Abstract

These Application Notes describe the procedures for configuring Computer Instruments eCI to interoperate with Avaya Voice Portal.

Computer Instruments eCI provides a simple solution for managing IVR call processes by enabling the ability to change caller experiences in real time without restarting services.

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 procedures for configuring Computer Instruments eCI to interoperate with Avaya Voice Portal.

Computer Instruments eCI provides a simple solution for managing IVR call processes by enabling the ability to change caller experiences in real time without restarting services.

These Application Notes assume that the pre-requisites in **Section 5** have been met prior to configuring the Avaya Voice Portal. Only steps relevant to this compliance test are described in this document.

2. General Test Approach and Test Results

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 for 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

The general test approach included verification of a successful integration of the eCI application with the Avaya Voice Portal. Modifications were made using the CII Voice Administrator and verified by placing calls to an extension defined on Avaya Voice Portal for reaching the eCI application. The following call scenarios were used to verify eCI functionality.

- Inbound calls
- Hold / Resume
- Call termination (origination/destination)
- Transfer (blind)
- Trunk-to-trunk blind transfer
- DTMF

2.2. Test Results

Computer Instruments eCI successfully passed the compliance testing.

2.3. Support

Technical support for the eCI solution can be obtained by contacting Computer Instruments at:

- URL – support@instruments.com
- Phone – (888) 451-0851 and option 2

3. Reference Configuration

Figure 1 illustrates the reference configuration used during testing. In the reference configuration, the eCI application was integrated with Avaya Voice Portal. Configuration for the eCI application was performed using the CII Voice Administrator and verification was done by placing calls to the eCI extension configured on the Avaya Voice Portal. Calls were placed both internally and externally to execute the eCI application.

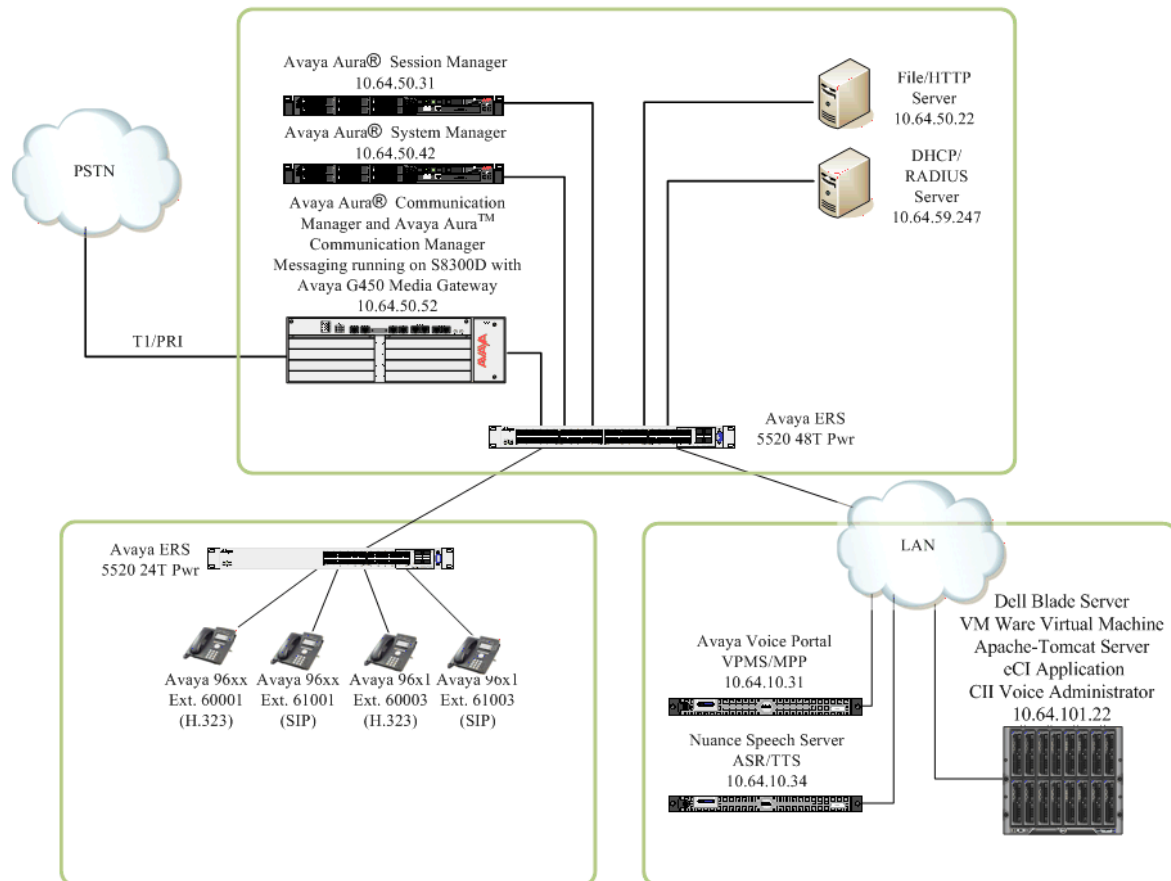


Figure 1: Test Configuration of eCI

4. Equipment and Software Validated

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

Equipment	Software/Firmware
<i>Avaya PBX Products</i>	
Avaya S8300D Server running Avaya Aura® Communication Manager	Avaya Aura® Communication Manager 6.0.1 with SP5.0.1(Patch 19303)
Avaya G450 Media Gateway MGP MM710 T1 Module MM711 Analog Module MM712 DCP Media Module MP80 VoIP-DSP	HW 2 FW 31.20.0 HW 5 FW 22 HW 23 FW 73 HW 7 FW 14 HW 6 FW 67
<i>Avaya Aura® Session Manager</i>	
Avaya Aura® Session Manager HP Proliant DL360 G7	6.1 with SP5
Avaya Aura® System Manager HP Proliant DL360 G7	6.1 with SP5
<i>Avaya Voice Portal</i>	
Avaya Voice Portal Dell Power Edge R610	5.1 (5.1.0.0.4201)
Nuance Speech Server Dell Power Edge 850	5.0
<i>Avaya Telephony Sets</i>	
Avaya 96xx Series IP Telephones	(H.323 3.1SP2), (SIP 2.6.6.0)
Avaya 96x1 Series IP Telephones	(H.323 S6.010f), (SIP 6.0.3)
<i>CII Products</i>	
Windows Server 2008 R2 Enterprise SP1 VM Ware Virtual Machine	
Experience Configuration Integration (eCI)	1.0
CII Voice Administrator	1.0
Apache-Tomcat	6.0.18

5. Pre-requisite Configuration

The following components must be installed and running in order for the eCI application to install and function properly. This configuration should be done by the CII support team and is not covered in these Application Notes.

- Apache-Tomcat server
 - DD compiled code needs JDK
- Microsoft .NET 4.0 framework
 - Updated with latest updates
- Microsoft IIS
 - ASP and ASP.NET enabled

6. Configure Avaya Voice Portal

This section describes the Avaya Voice Portal configuration to support the network shown in **Figure 1**.

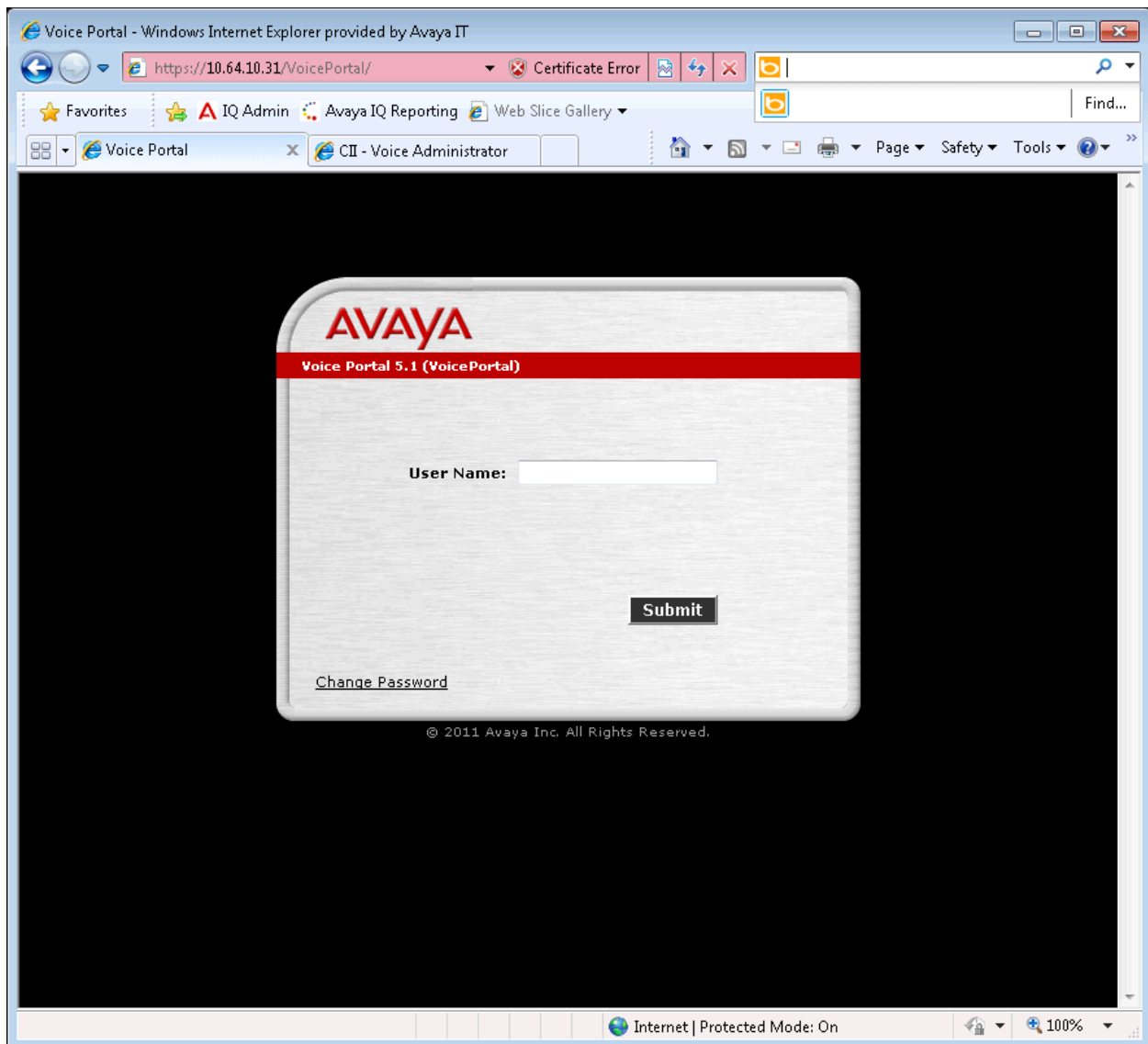
The configuration of Avaya Voice Portal was performed using a web browser.

The Avaya Voice Portal configuration includes the following:

- Connect to Avaya Voice Portal
- Add eCI application
 - Verify eCI application
 - Save eCI application

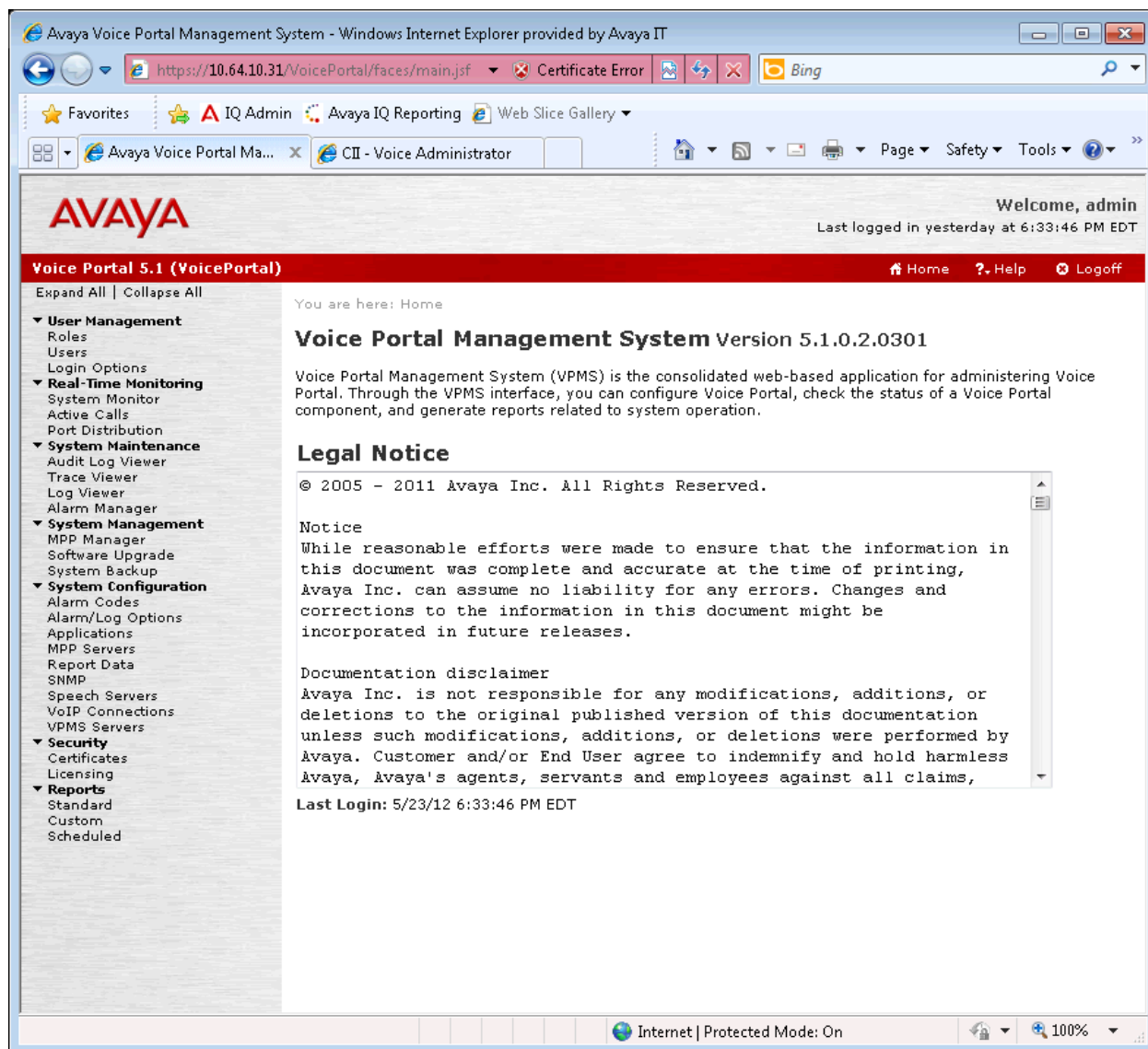
6.1. Connect to Avaya Voice Portal

From a PC, open a web browser and enter the URL for Avaya Voice Portal. Log in with the proper credentials.



6.2. Add eCI Application

From the left pane, under **System Configuration** select **Applications**.



After selecting **Applications** the following page should be displayed.

Avaya Voice Portal Management System - Windows Internet Explorer provided by Avaya IT

https://10.64.10.31/VoicePortal/faces/main.jsf

Welcome, admin
Last logged in yesterday at 6:33:46 PM EDT

AVAYA

Voice Portal 5.1 (VoicePortal)

Expand All | Collapse All

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

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

Applications

This page displays the VoiceXML and CCXML applications that are currently deployed on the Voice Portal system. When a call comes in, Voice Portal compares the called number or URI with the values in the Launch column, starting with the first application in the list and proceeding down the list in order. As soon as it finds a match, it invokes that application to handle the call. If two or more applications have launch values that overlap or duplicate each other, make sure that the application you want Voice Portal to use appears first in the list. To move an application, click [Change Launch Order](#).

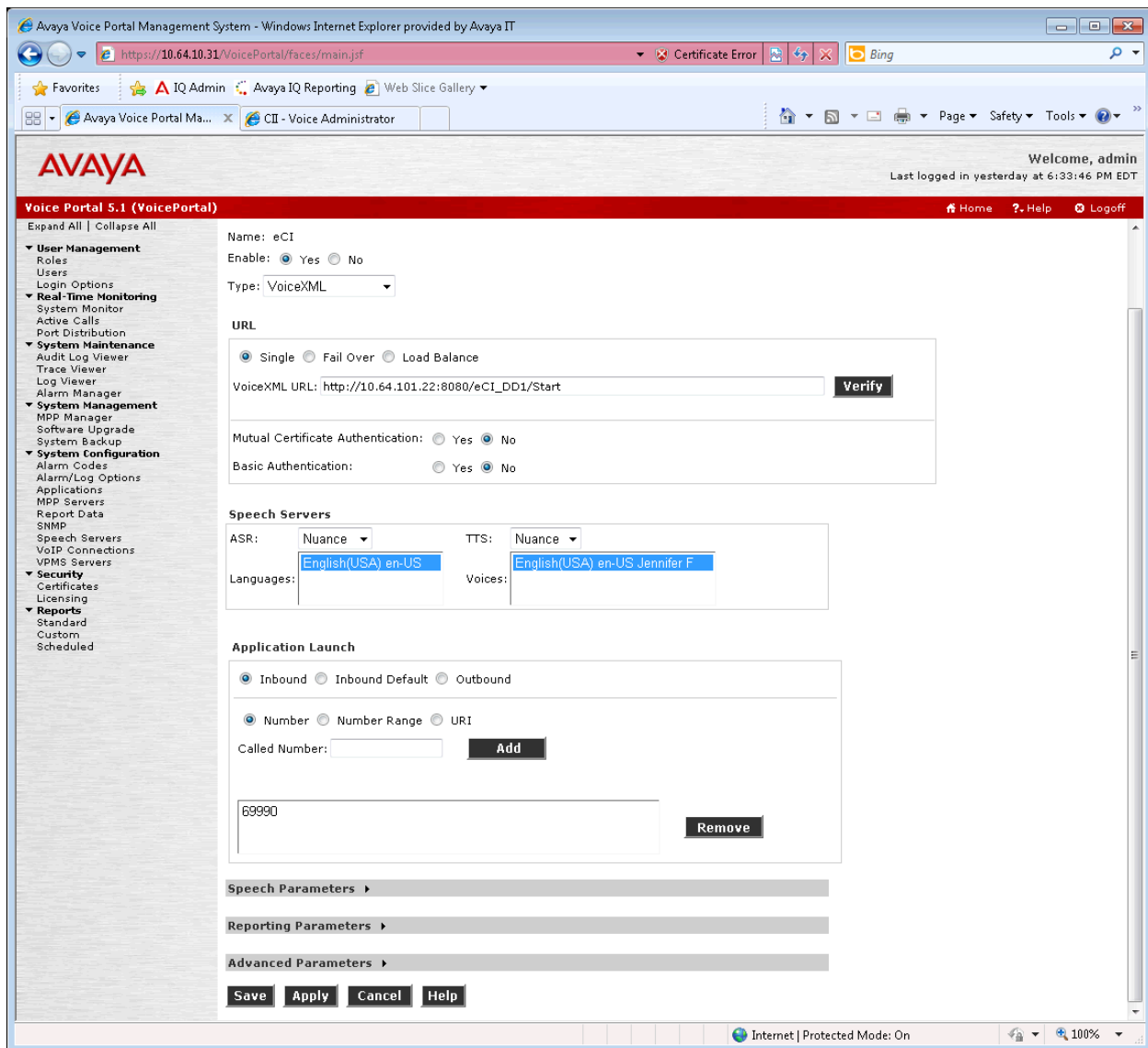
<input type="checkbox"/>	Name	Enable	Type	URL	Launch	ASR	Languages	TTS	Voices	Configurable Application Variables
<input type="checkbox"/>	VH_IB	Yes	VoiceXML	http://10.64.21.75:8080/VXMLIVR_1.0.2.1975/PlatformSupport_AVP/Begin/?Tenant=VHTAVP&ScriptID=1&MODE=AVP	61175, 58881, 61000	No	ASR	No	TTS	
<input type="checkbox"/>	VH_OB	Yes	VoiceXML	http://10.64.21.75:8080/VXMLIVR_1.0.2.1975/PlatformSupport_AVP/Outbound/?Tenant=VHTAVP&ScriptID=1&MODE=AVP&Segment=61000	Outbound	No	ASR	No	TTS	

[Add](#) [Delete](#) [Help](#)

Done

Internet | Protected Mode: On

From this page select **Add** to configure the eCI application.



Complete the fields as follows:

Name: Enter a name for the application. In the compliance test **eCI** was used.

Type: Choose the correct type from the pull-down box.

*Note: The eCI application is **VoiceXML**.*

URL Box

VoiceXML URL: Provide the location of the application.

Note: eCI was deployed on an Apache-Tomcat Sever at the URL provided.

Speech Servers Box

ASR: Select the speech server from the ASR pull-down box.

TTS: Select the TTS server from the TTS pull-down box.

Note: Nuance was used for both ASR and TTS.

Called Number: Enter the number to be dialed for reaching the application. Click the **Add** button. This will populate the box below the button with the assigned number.

Verify Button: After entering the URL information, click the **Verify** button to make sure the application is accessible.

The following page should be displayed:

Form Start - Windows Internet Explorer provided by Avaya IT

http://10.64.101.22:8080/eCI_DD1/Start

Snagit

Favorites IQ Admin Avaya IQ Reporting Web Slice Gallery

Form Start

AVAYA

Starting application : eCI_DD1

Application Startup Parameters

AAI	<input type="text"/>
ANI	<input type="text"/>
DNIS	<input type="text"/>
Protocol Name	<input type="text"/>
Protocol Version	<input type="text"/>
UUI	<input type="text"/>
Call Tag	<input type="text"/>
Channel	<input type="text"/>
VP-Called Extension	<input type="text"/>
VP-Coverage Reason	<input type="text"/>
VP-Coverage Type	<input type="text"/>
VP-RDNIS	<input type="text"/>
Redirect URI	<input type="text"/>
Redirect Presentation Info	<input type="text"/>
Redirect Screening Info	<input type="text"/>
Redirect Reason	<input type="text"/>
Shared Mode	<input type="text"/>
Shared UUI ID	<input type="text"/>
Shared UUI Value	<input type="text"/>
Session Label	<input type="text"/>
SIPCallID	<input type="text"/>
Media Type	<input type="text"/>
Video Enabled	<input type="text"/>
Video Codec	<input type="text"/>

Done Internet | Protected Mode: On 100%

After a successful verification, click the **Save** button. The newly added application should now be in the list.

The screenshot shows the Avaya Voice Portal Management System interface in a Windows Internet Explorer browser. The page title is "Avaya Voice Portal Management System - Windows Internet Explorer provided by Avaya IT". The address bar shows the URL "https://10.64.10.31/VoicePortal/faces/main.jsf". The page has a red header bar with the Avaya logo and the text "Voice Portal 5.1 (VoicePortal)". The user is logged in as "admin" and the page shows the "Applications" configuration page. The page content includes a table of applications and a sidebar with navigation links.

Applications

This page displays the VoiceXML and CCXML applications that are currently deployed on the Voice Portal system. When a call comes in, Voice Portal compares the called number or URI with the values in the Launch column, starting with the first application in the list and proceeding down the list in order. As soon as it finds a match, it invokes that application to handle the call. If two or more applications have launch values that overlap or duplicate each other, make sure that the application you want Voice Portal to use appears first in the list. To move an application, click Change Launch Order.

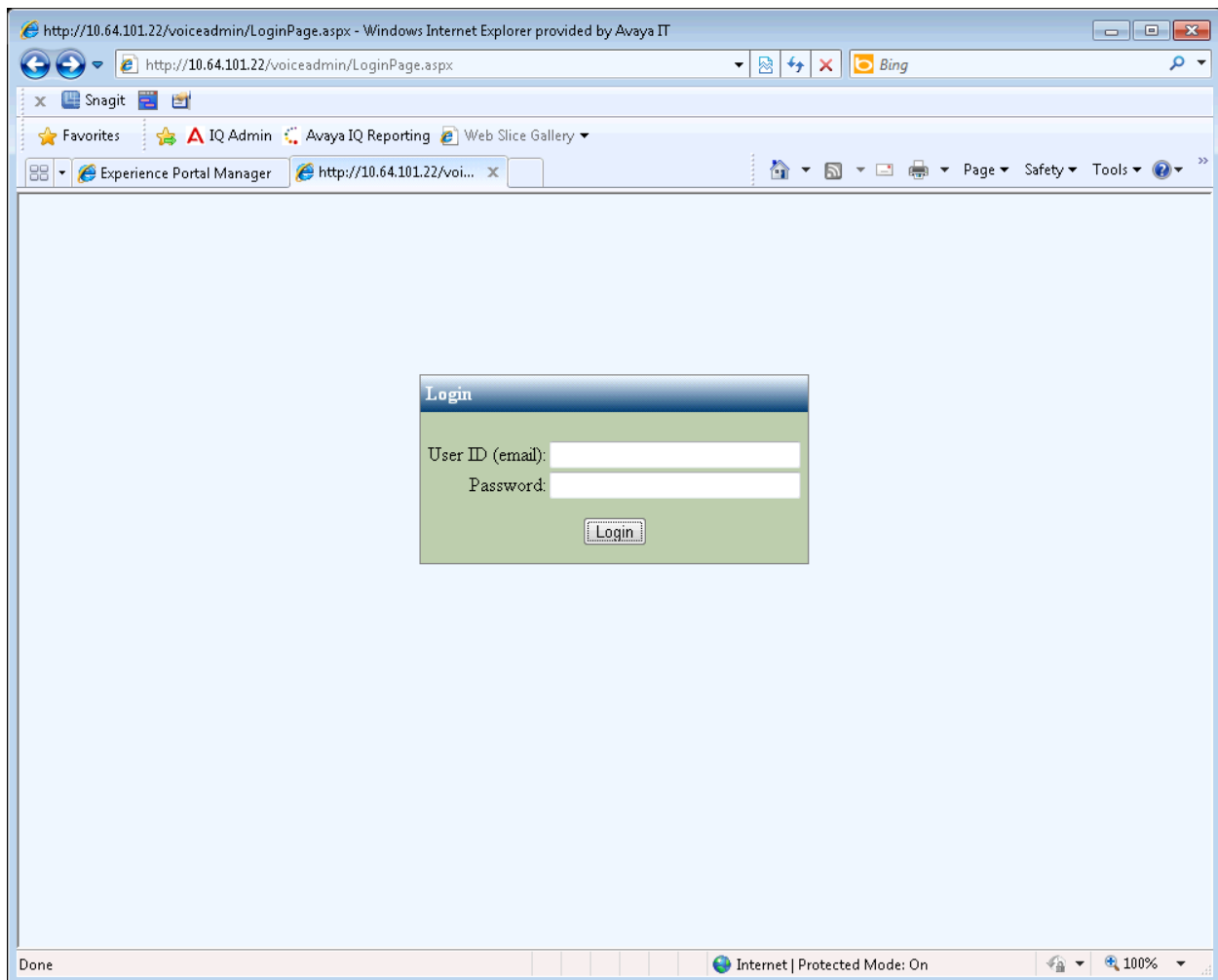
	Name	Enable	Type	URL	Launch	ASR	Languages	TTS	Voices	Configurable Application Variables
<input type="checkbox"/>	VH_IB	Yes	VoiceXML	http://10.64.21.75:8080/VXMLIVR_1.0.2.1975/PlatformSupport_AVP/Begin/? Tenant=VHTAVP& ScriptID=1& MODE=AVP	61175, 58881, 61000	No ASR		No TTS		
<input type="checkbox"/>	VH_OB	Yes	VoiceXML	http://10.64.21.75:8080/VXMLIVR_1.0.2.1975/PlatformSupport_AVP/Outbound/? Tenant=VHTAVP& ScriptID=1& MODE=AVP& Segment=61000	Outbound	No ASR		No TTS		
<input type="checkbox"/>	eCI	Yes	VoiceXML	http://10.64.101.22:8080/eCI_DD1/Start	69990	Nuance	English(USA) en-US	Nuance	English (USA) on-US Jennifer F	

Add Delete Help

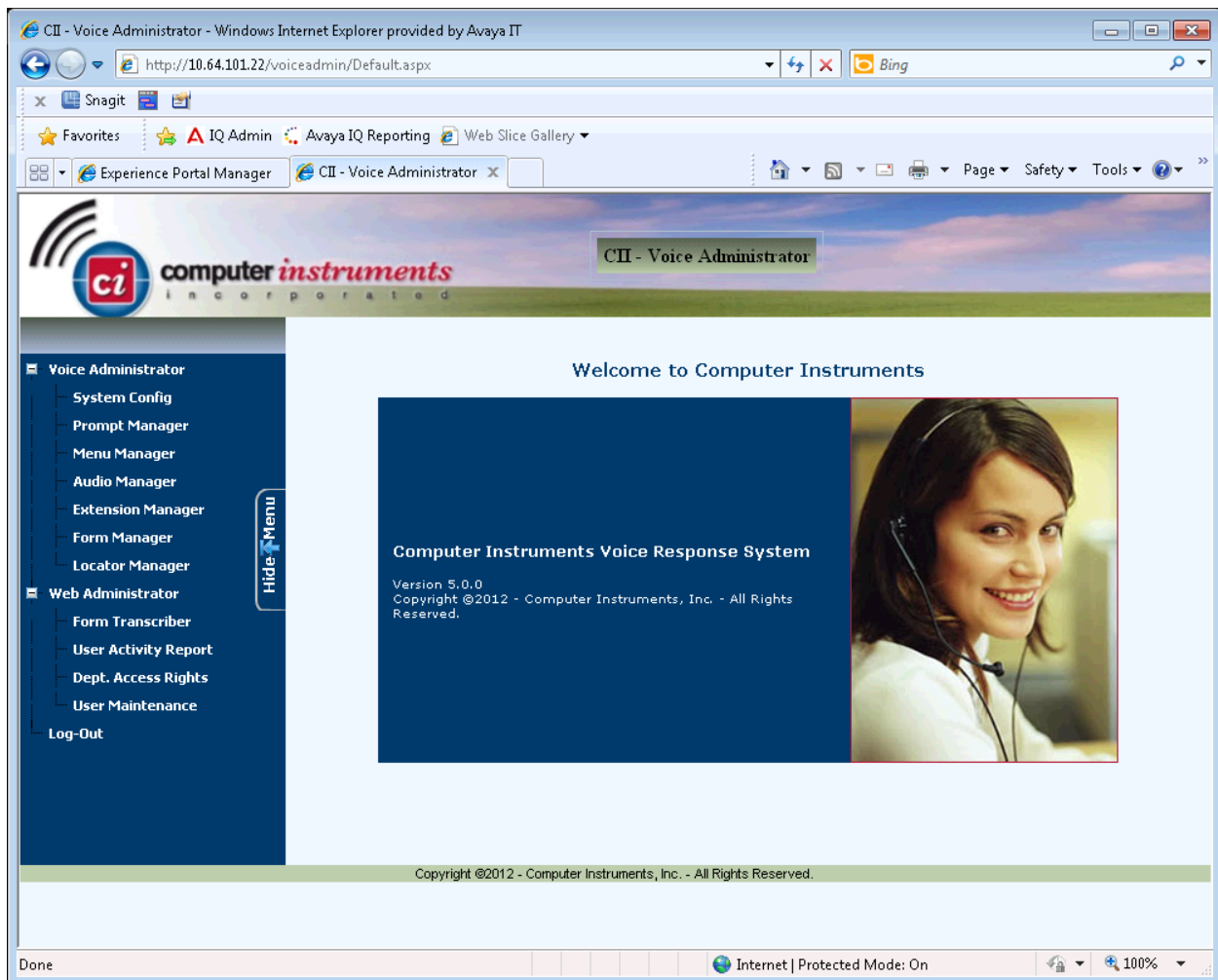
6.3. Configure eCI

After the pre-requisite installation/configuration of eCI, the application will function properly. When eCI changes are required, use the CII Voice Administrator.

From a PC, open a web browser and enter the URL for the CII Voice Administrator. Login with the proper credentials.



Navigate the following menus for making dynamic modifications to the initial IVR.



7. Verification Steps

The following steps may be used to verify proper configuration between Avaya Voice Portal and eCI.

7.1. Verify Avaya Voice Portal

From the Avaya Voice Portal VPMS, below **Real Time Monitoring** select **System Monitor**.

The **Avaya Voice Portal System Monitor** screen is displayed, as shown below. Verify that the MPPs are online, running, and OK. Also review any alarms if they are present.

Avaya Voice Portal Management System - Windows Internet Explorer provided by Avaya IT

https://10.64.10.31/VoicePortal/faces/main.jsf

AVAYA

Welcome, admin
Last logged in yesterday at 6:33:46 PM EDT

Voice Portal 5.1 (VoicePortal)

Home ? Help Logout

Expand All | Collapse All

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

System Monitor (5/24/12 11:16:37 AM EDT) [Refresh](#)

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

Summary VoicePortal Details

Last Poll: 5/24/12 11:16:24 AM EDT

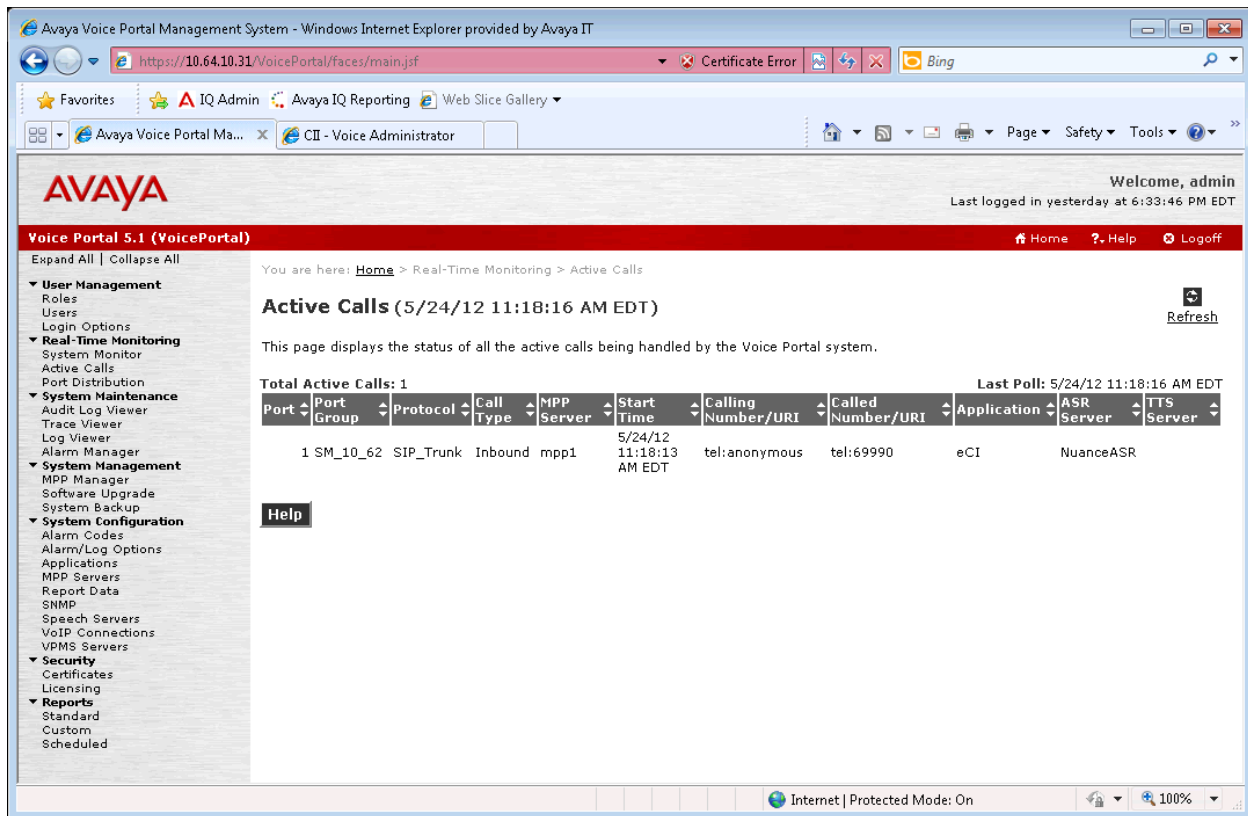
Server Name	Type	Mode	State	Config	Call Capacity			Active Calls		Calls Today	Alarms
					Current	Licensed	Maximum	In	Out		
VPMS	VPMS										
mpp1	MPP	Online	Running	OK	10	10	10	0	0	0	
Summary	VP				10	10	10	0	0	0	

[Help](#)

Done Internet | Protected Mode: On 100%

Place a call to the application phone number configured in **section 6.2**

Verify the active call from Avaya Voice Portal.



7.2. Verify eCI Application

Place a call to the eCI application phone number. Once the call is connected, follow the prompts and verify the correct functionality.

8. Conclusion

Computer Instruments eCI passed compliance testing. These Application Notes describe the procedures required to configure Computer Instruments eCI to interoperate with Avaya Voice 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] *Implementing Voice Portal on multiple servers*, March 2012.
- [2] *Implementing Voice Portal on single servers*, March 2012.
- [3] *Administering Voice Portal*, January 2011.

The following CII product documentation can be found at <http://www.instruments.com/doclib/index.html>

- [1] *eCI User's Manual*, April 2012.
- [2] *eCI User's Tutorial*, April 2012.

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