



Avaya Solution & Interoperability Test Lab

Application Notes for Ontira iEngine IVR Suite with Avaya Interactive Response - Issue 1.0

Abstract

These Application Notes describe the procedures for configuring the Ontira iEngine IVR Suite with Avaya Interactive Response, Avaya S8700 Media Server, and Avaya G650 Media Gateway. The Ontira iEngine IVR Suite enables sophisticated speech-enabled applications, by combining the Ontira Media Engine to manage the call flow and the Ontira DataTalker Gateway to manage scheduled out-going calls. The focus is on the configuration of the H.323 and speech resources on the Avaya Interactive Response and the configuration of loop-start lines on the Ontira DataTalker Gateway. Sample IVR applications from the Ontira Transit Authority Suite were used to verify the successful interaction of Ontira Media Engine with Avaya Interactive Response and the interaction of Ontira DataTalker Gateway with Avaya Communication Manager. Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration for the compliance test between Ontira iEngine IVR Suite and Avaya Interactive Response.

The Ontira iEngine IVR Suite implements self-service applications for public transit agencies. The applications deliver sophisticated speech-enabled services to allow public access to transit system information and for paratransit clients to manage on-demand trip scheduling. The IVR Suite has two components, a Media Engine and a DataTalker Gateway. The Ontira Media Engine interacts with Avaya Interactive Response and Scansoft speech servers to process the application call flow. The Ontira DataTalker Gateway handles outgoing calls to notify clients of upcoming trips they have scheduled.

Figure 1 illustrates the Ontira iEngine solution consisting of Avaya Interactive Response, Avaya Communication Manager, a third-party speech server and a combined Ontira Media Engine/Ontira DataTalker Gateway server.

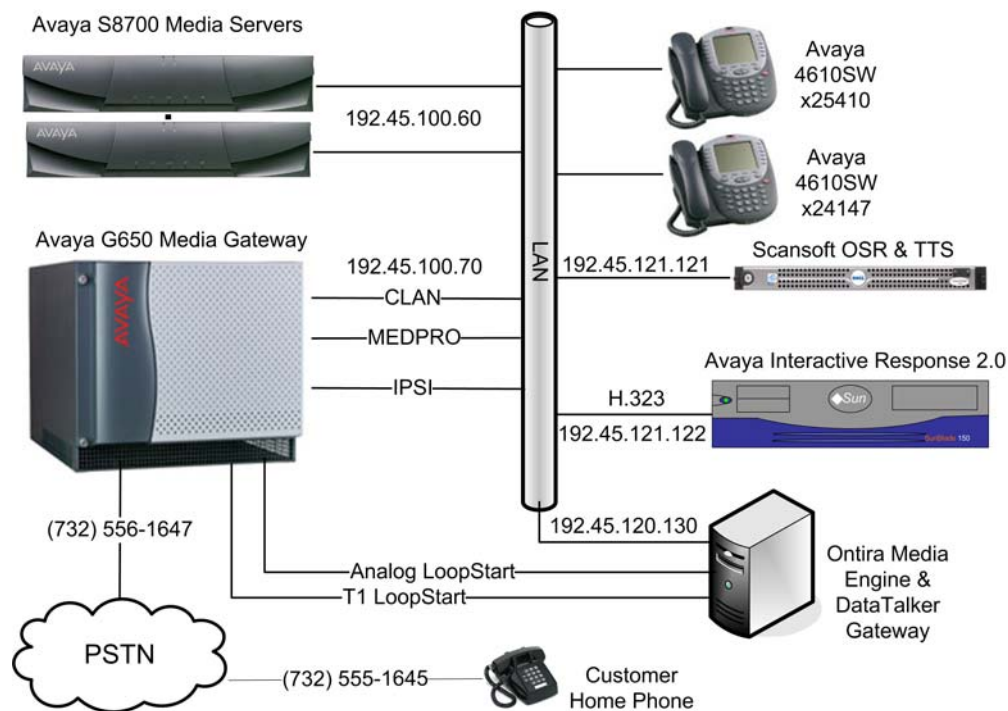


Figure 1: Compliance Test Configuration

2. Equipment and Software Validated

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

Equipment	Software
Avaya S8700 Media Server	Avaya Communication Manager 3.1.1 (R013x.01.1.628.7)
Avaya G650 Media Gateway Avaya TN2312BP IPSI Avaya TN799DP C-LAN Avaya TN2302AP MEDPRO Avaya TN464F DS1	HW10 FW021 HW01 FW015 HW11 FW104 Vintage 000010
Avaya 4610SW IP Telephone	Release 2.3
SunFire 280R	Avaya Interactive Response 2.0
Dell PowerEdge 850	Scansoft OSR 3.0.4 and Speechify 3.0.4
Ontira iEngine	IVR Media Engine 3.0 and DataTalker Gateway 2.6

3. Configure Avaya Communication Manager

The steps in this section specify the configuration of Avaya Communication Manager resources used for the example configuration. Section 3.1 covers the licensing and H.323 configuration requirements for the Avaya Interactive Response integration. Section 3.2 covers the line configurations used to connect the Ontira DataTalker Gateway.

3.1. Configure Avaya Interactive Response H.323 Integration

3.1.1. Verify Avaya Communication Manager Licenses

The following commands are entered on the Avaya Communication Manager System Access Terminal (SAT).

Step	Description
1.	<p>Issue the command “display system-parameters customer-options” to display the active licensed features. Go to Page 2 and verify that “Maximum Concurrently Registered IP Stations” is set to a value equal to or greater than the number of endpoints projected in the configuration.</p> <pre> display system-parameters customer-options Page 2 of 11 OPTIONAL FEATURES IP PORT CAPACITIES Maximum Administered H.323 Trunks: 5000 151 Maximum Concurrently Registered IP Stations: 5000 13 Maximum Administered Remote Office Trunks: 0 0 Maximum Concurrently Registered Remote Office Stations: 0 0 Maximum Concurrently Registered IP eCons: 0 0 Max Concur Registered Unauthenticated H.323 Stations: 10 0 Maximum Video Capable H.323 Stations: 0 0 Maximum Video Capable IP Softphones: 0 0 Maximum Administered SIP Trunks: 50 30 Maximum Number of DS1 Boards with Echo Cancellation: 0 0 Maximum TN2501 VAL Boards: 1 1 Maximum G250/G350/G700 VAL Sources: 0 0 Maximum TN2602 Boards with 80 VoIP Channels: 0 0 Maximum TN2602 Boards with 320 VoIP Channels: 0 0 Maximum Number of Expanded Meet-me Conference Ports: 0 0 (NOTE: You must logoff & login to effect the permission changes.) </pre>
2.	<p>Go to Page 4 and verify that “IP Stations” is set to “y”. Note that “Media Encryption Over IP” is not used in this example.</p> <pre> display system-parameters customer-options Page 4 of 10 OPTIONAL FEATURES Emergency Access to Attendant? y IP Stations? y Enable 'dadmin' Login? y Internet Protocol (IP) PNC? n Enhanced Conferencing? n ISDN Feature Plus? n Enhanced EC500? n ISDN Network Call Redirection? n Enterprise Survivable Server? n ISDN-BRI Trunks? n Enterprise Wide Licensing? n ISDN-PRI? y ESS Administration? n Local Survivable Processor? n Extended Cvg/Fwd Admin? n Malicious Call Trace? n External Device Alarm Admin? n 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? n Multifrequency Signaling? y Global Call Classification? n Multimedia Appl. Server Interface (MASI)? n Hospitality (Basic)? y Multimedia Call Handling (Basic)? n Hospitality (G3V3 Enhancements)? n Multimedia Call Handling (Enhanced)? n IP Trunks? n IP Attendant Consoles? n (NOTE: You must logoff & login to effect the permission changes.) </pre>

3.1.3. Configure IP Stations for Avaya Interactive Response

Configure the IP stations that Avaya Interactive Response will use to connect to Avaya Communication Manager. In this example, two ports are used between Avaya Interactive Response and Avaya Communication Manager. Use the following steps to add stations 28201 and 28202.

Step	Description
1.	<p>Add a station for each channel assigned to Avaya Interactive Response. Issue the command “add station 28201” and set the options in boldface as indicated. Set “Display Module” to “y” and “Display Language” to “english”, these enable calling party information (ANI) to be passed to the VXML application. Set “Security Code” to “1234”, “IP SoftPhone” to “y”, “Type” to “7434ND”, and “Port” to “IP”, these are required to allow the port to register with Avaya Communication Manager. Repeat for extension 28202.</p> <pre> add station 28201 Extension: 28201 Type: 7434ND Port: IP Name: Ontira IR channel STATION OPTIONS Loss Group: 2 Data Module? n Display Module? y Display Language: english STATION Lock Messages? n Security Code: 1234 Coverage Path 1: Coverage Path 2: Hunt-to Station: Personalized Ringing Pattern: 1 Message Lamp Ext: 28201 Coverage Module? n Media Complex Ext: IP SoftPhone? y IP Video Softphone? N </pre>
2.	<p>Go to Page 2 and set “Multimedia Mode” to “enhanced”.</p> <pre> add station 28201 FEATURE OPTIONS LWC Reception: spe LWC Activation? y LWC Log External Calls? n CDR Privacy? n Redirect Notification? y Per Button Ring Control? n Bridged Call Alerting? n Active Station Ringing: single H.320 Conversion? n Service Link Mode: as-needed Multimedia Mode: enhanced MWI Served User Type: AUDIX Name: STATION Auto Select Any Idle Appearance? n Coverage Msg Retrieval? y Auto Answer: none Data Restriction? n Idle Appearance Preference? n Bridged Idle Line Preference? n Restrict Last Appearance? y Conf/Trans on Primary Appearance? n Per Station CPN - Send Calling Number? y Display Client Redirection? n Select Last Used Appearance? n Coverage After Forwarding? s Remote Softphone Emergency Calls: as-on-local Direct IP-IP Audio Connections? y Emergency Location Ext: 28201 Always Use? n IP Audio Hairpinning? y </pre>

Step	Description
3.	<p>Go to Page 5 and set DISPLAY BUTTON “1” to “normal.”</p> <pre> change station 28201 STATION Page 5 of 5 DISPLAY BUTTON ASSIGNMENTS 1: normal 2: 3: 4: 5: 6: 7: </pre>

3.1.4. Configure Hunt Group for Avaya Interactive Response

Step	Description
1.	<p>Choose an available hunt group number and group extension for Avaya Interactive Response. In this example, hunt group 201 and extension 28200 were used. Issue the command “add hunt-group 201”, set “Group Number” to “201” and “Group Extension” to “28200”. The “Group Name” field is used to describe how the hunt group is used. Set “ISDN/SIP Caller Display” to “grp-name”.</p> <pre> add hunt-group 201 HUNT GROUP Page 1 of 60 Group Number: 201 ACD? n Group Name: IR2 Ontira Hunt Queue? n Group Extension: 28200 Vector? n Group Type: ucd-mia Coverage Path: TN: 1 Night Service Destination: COR: 1 MM Early Answer? n Security Code: Local Agent Preference? n ISDN/SIP Caller Display: grp-name </pre>
2.	<p>Go to Page 3 and add all the extensions assigned to this hunt group. In this example, extensions 28201 and 28202 were used.</p> <pre> add hunt-group 201 HUNT GROUP Page 3 of 60 Group Number: 201 Group Extension: 28200 Group Type: ucd-mia Member Range Allowed: 1 - 1500 Administered Members (min/max): 1 /2 Total Administered Members: 2 GROUP MEMBER ASSIGNMENTS Ext Name (24 characters) Ext Name (24 characters) 1: 28201 IR IP chan - IR2.0 14: 2: 28202 IR IP chan - IR2.0 15: 3: 16: 4: 17: 5: 18: </pre>

3.2. Configure Avaya Communication Manager Loop-Start Lines

This section shows the configuration steps for lines used in this example. The Ontira DataTalker Gateway uses loop-start lines to place outgoing calls to remind clients of scheduled trips and to provide itinerary updates. The outgoing calls were routed out of Avaya Communication Manager to a local analog CO trunk.

3.2.1. Configure Loop-Start Analog Stations for Ontira DataTalker Gateway

Step	Description
1.	<p>Add the stations that will be connected to the DataTalker Gateway. Choose an available extension number and an available port. Add a new station as an analog telephone. For this example, issue the command “add station 24589”: set “Type” to “2500”, set “Name” to a descriptive string, and set “Port” to “2a0508”.</p> <pre>add station 24589 Page 1 of 3 STATION Extension: 24589 Lock Messages? n BCC: 0 Type: 2500 Security Code: TN: 1 Port: 2a0508 Coverage Path 1: COR: 1 Name: Onitra line 1 Coverage Path 2: COS: 1 Hunt-to Station: Tests? y STATION OPTIONS Loss Group: 1 Message Waiting Indicator: none Off Premises Station? n Survivable COR: internal Survivable Trunk Dest? y</pre>

3.2.2. Configure Loop-Start T1 for Ontira DataTalker Gateway

Step	Description
1.	<p>The DataTalker Gateway also supports T1 lines for outgoing calls. Choose an available DS1 circuit pack and add a new configuration using the options shown to match the defaults on the DataTalker. For this example, issue the command “add ds1 2a13”: set “Signaling Mode” to “robbed-bit”, set “Name” to a descriptive string, set “Line Coding” to “ami-zcs”, and set “Framing Mode” to “d4”.</p> <pre>add ds1 2a13 Page 1 of 1 DS1 CIRCUIT PACK Location: 02A13 Name: OntiraT1 Bit Rate: 1.544 Line Coding: ami-zcs Line Compensation: 1 Framing Mode: d4 Signaling Mode: robbed-bit Interface Companding: mulaw Idle Code: 11111111 Slip Detection? n Near-end CSU Type: other</pre>

3.2.3. Configure Analog CO Line for Outgoing Calls

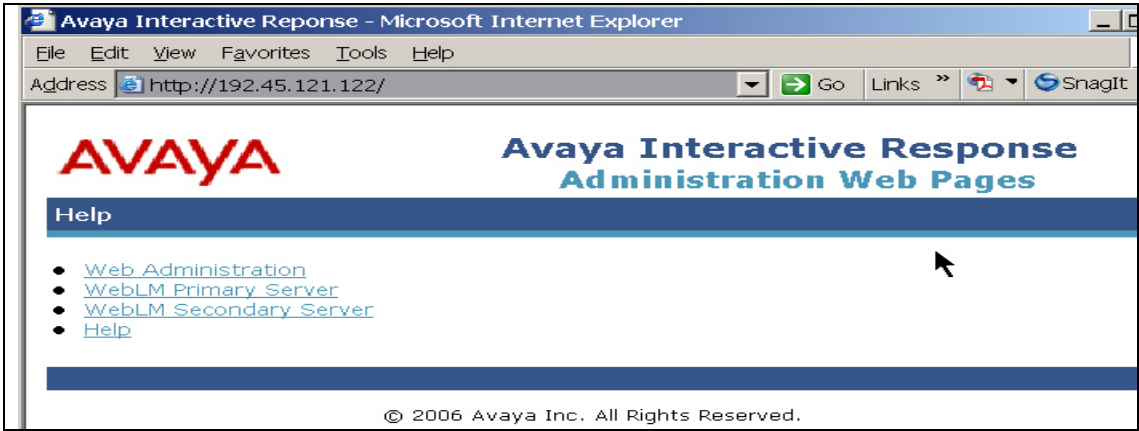
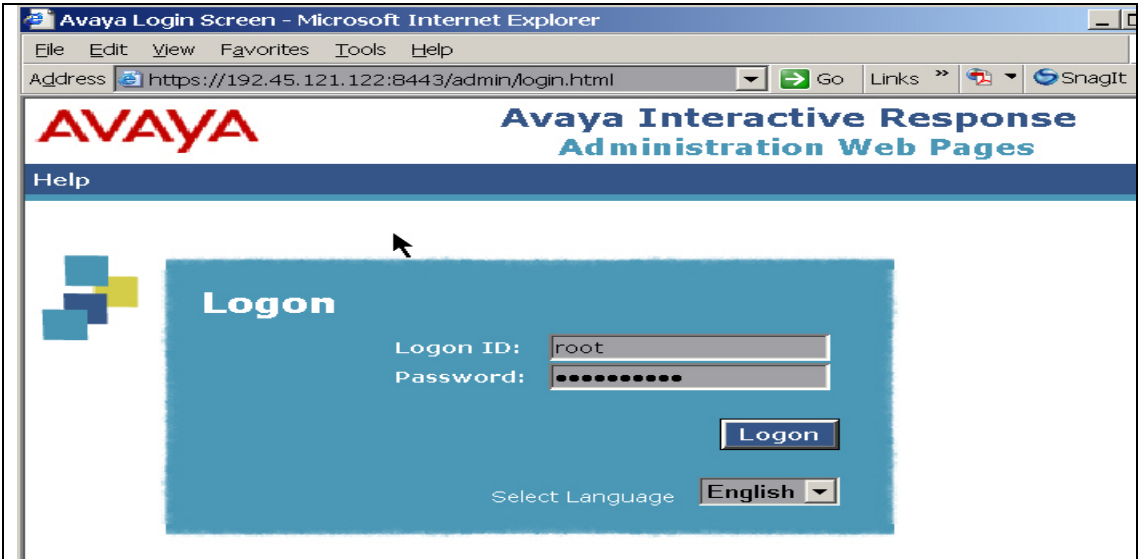
Step	Description
1.	<p>Add a trunk group that contains outgoing analog loop-start lines. Choose an available trunk-group number and an available TAC. In this example, trunk group 8 and TAC 108 were used. Issue the “add trunk-group 8” command: set “Group Name” to a descriptive name, set “TAC” to “108”, set “Incoming Destination” to “28200” this is the hunt group number that was added in Section 3.1.4, and set the “Trunk Type” to “loop-start”.</p> <pre> add trunk-group 8 Page 1 of 21 TRUNK GROUP Group Number: 8 Group Type: co CDR Reports: y Group Name: Ontira COR: 1 TN: 1 TAC: 108 Direction: two-way Outgoing Display? n Dial Access? n Busy Threshold: 255 Night Service: Queue Length: 0 Country: 1 Incoming Destination: 28200 Comm Type: voice Auth Code? n Digit Absorption List: Prefix-1? y Trunk Flash? n Toll Restricted? y Trunk Type: loop-start </pre>
2.	<p>Go to Page 5 and add all the analog ports assigned to this group. In this example, only one port was used. Add port “3a0601” as the first group member.</p> <pre> add trunk-group 8 Page 5 of 21 TRUNK GROUP Administered Members (min/max): 0/0 GROUP MEMBER ASSIGNMENTS Total Administered Members: 0 Port Code Sfx Name Night Mode Type Ans Delay 1: 3a0601 TN429 D 2: 3: 4: </pre>

4. Configure Avaya Interactive Response

This section presents the steps to configure the port, speech recognition, and text-to-speech resources on Avaya Interactive Response.

4.1. Logon to Avaya Interactive Response Administration Web Page

Open a web browser and enter the IP address or host name of the Avaya Interactive Response.

Step	Description
1.	<p>In this example, the IP address is 192.45.121.122. Click the “Web Administration” link to access the Logon page.</p> 
2.	<p>Enter a “Logon ID” and “Password” of an account that has administrator privileges and click the “Logon” button.</p> 

4.2. Verify Avaya Interactive Response Licensing

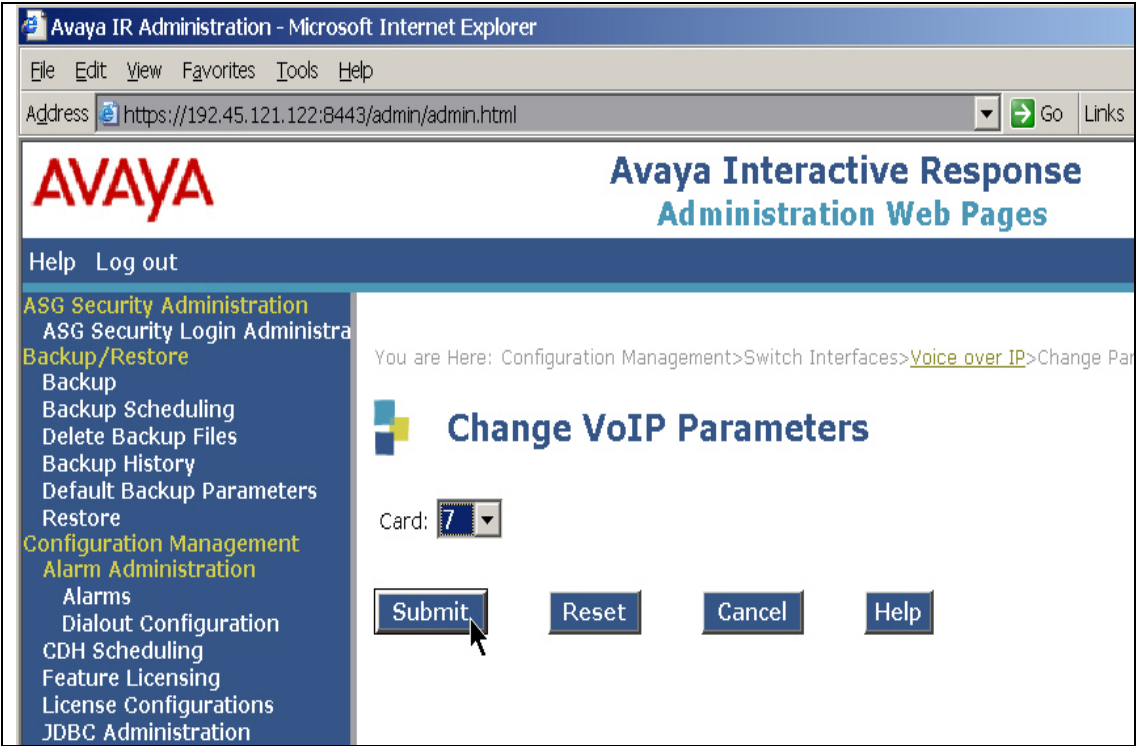
The Ontira applications use both advanced speech recognition and text-to-speech ports. Verify that there are enough available licenses for the resources that will be added.

Step	Description																														
1.	<p>Click “Feature Licensing” from the menu on the left side of the page, verify the “Free” column values are sufficient for each of the resources to be added.</p> <div><div>Avaya IR Administration - Microsoft Internet Explorer</div><div>File Edit View Favorites Tools Help</div><div>Address https://192.45.121.122:8443/admin/admin.html Go Links SnagIt</div><div><div><div>AVAYA</div><div>Avaya Interactive Response Administration Web Pages</div><div>Help Log out</div><div>ASG Security Administration</div><div>ASG Security Login Administration</div><div>Backup/Restore</div><div>Backup</div><div>Backup Scheduling</div><div>Delete Backup Files</div><div>Backup History</div><div>Default Backup Parameters</div><div>Restore</div><div>Configuration Management</div><div>Alarm Administration</div><div>Alarms</div><div>Dialout Configuration</div><div>CDH Scheduling</div><div>Feature Licensing</div><div>License Configurations</div><div>JDBC Administration</div><div>Message Administration</div><div>VXML Log Administration</div><div>SNMP Configuration</div><div>System Control</div><div>Renumber Voice Channels</div><div>Report Voice System Status</div><div>Start Voice System</div><div>Stop Voice System</div><div>Switch Interfaces</div><div>Digital Interfaces</div><div>Voice over IP</div><div>Voice Equipment</div><div>Display Equipment</div><div>Equipment State</div><div>Channels to Groups</div><div>Phone Number</div><div>Display Passwords</div><div>Voice Services</div><div>Channel Services</div><div>Number Services</div><div>Feature Packages</div><div>Speech and DPR Administration</div><div>Display Status</div><div>Administration</div><div>Universal Call ID Administration</div><div>Reports</div><div>Call Data Handling Reports</div><div>Message Log Report</div><div>VXML Log Report</div><div>VXML Performance Log Report</div></div><div><table><thead><tr><th>Feature Type</th><th>Primary Tot</th><th>Primary Free</th><th>Secondary Tot</th><th>Secondary Free</th><th>Feature Name</th></tr></thead><tbody><tr><td>VALUE_IR_ASR_PORTS</td><td>128</td><td>124</td><td>*S</td><td></td><td>Advanced Speech Recognition</td></tr><tr><td>VALUE_IR_TTS_PORTS</td><td>128</td><td>124</td><td>*S</td><td></td><td>Text To Speech (Speech Synthesis)</td></tr><tr><td>VALUE_IR_PORTS</td><td>128</td><td>7</td><td>*S</td><td></td><td>Digital and Voice Over IP</td></tr><tr><td>VALUE_IR_SNMP</td><td>128</td><td>127</td><td>*S</td><td></td><td>Simple Network Management Protocol</td></tr></tbody></table><p>*S: Secondary WebLM server is not configured</p></div></div></div>	Feature Type	Primary Tot	Primary Free	Secondary Tot	Secondary Free	Feature Name	VALUE_IR_ASR_PORTS	128	124	*S		Advanced Speech Recognition	VALUE_IR_TTS_PORTS	128	124	*S		Text To Speech (Speech Synthesis)	VALUE_IR_PORTS	128	7	*S		Digital and Voice Over IP	VALUE_IR_SNMP	128	127	*S		Simple Network Management Protocol
Feature Type	Primary Tot	Primary Free	Secondary Tot	Secondary Free	Feature Name																										
VALUE_IR_ASR_PORTS	128	124	*S		Advanced Speech Recognition																										
VALUE_IR_TTS_PORTS	128	124	*S		Text To Speech (Speech Synthesis)																										
VALUE_IR_PORTS	128	7	*S		Digital and Voice Over IP																										
VALUE_IR_SNMP	128	127	*S		Simple Network Management Protocol																										

4.3. Configure Avaya Interactive Response VoIP Interface

In this example, a Voice over IP (VoIP) switch interface was used to connect the Avaya Interactive Response to Avaya Communication Manager. The following steps show the configuration options and the phone number assignments that were used.

Step	Description
1.	<p>Click the “Voice over IP” menu item, then click the “Change Parameters” link.</p> 

Step	Description
2.	<p>Card number 7 was used in this example, choose “7” from the pull down menu, then click the “Submit” button.</p> 
3.	<p>The following are the options that were used to configure card 7.</p> <ul style="list-style-type: none"> • “Card Name” is a descriptive string. • “Card Enabled?” is “yes”. • “Card IP Address” is the address of the Avaya Interactive Response, “192.45.121.122”. • “Gatekeeper IP Address” is the CLAN address of the Avaya Media Gateway “192.45.100.70”. • “Station Authentication Enabled” is “yes”, required for registering with the gatekeeper. • “Avaya CM Name” is a descriptive string of Avaya Communication Manager. • “No of Ports” is the maximum number of channels/IP stations this card can register, in this example, only two ports are used. • “Avaya CM Version” is the major version number of Avaya Communication Manager software. • “Media Encryption” is “Disabled”, encryption is not used on Avaya Interactive Response VoIP channels. • The remaining options only need to be changed from the defaults if the local IP network requires non-standard values.

Avaya IR Administration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <https://192.45.121.122:8443/admin/admin.html> Go Links SnagIt

AVAYA

Avaya Interactive Response Administration Web Pages

Help Log out

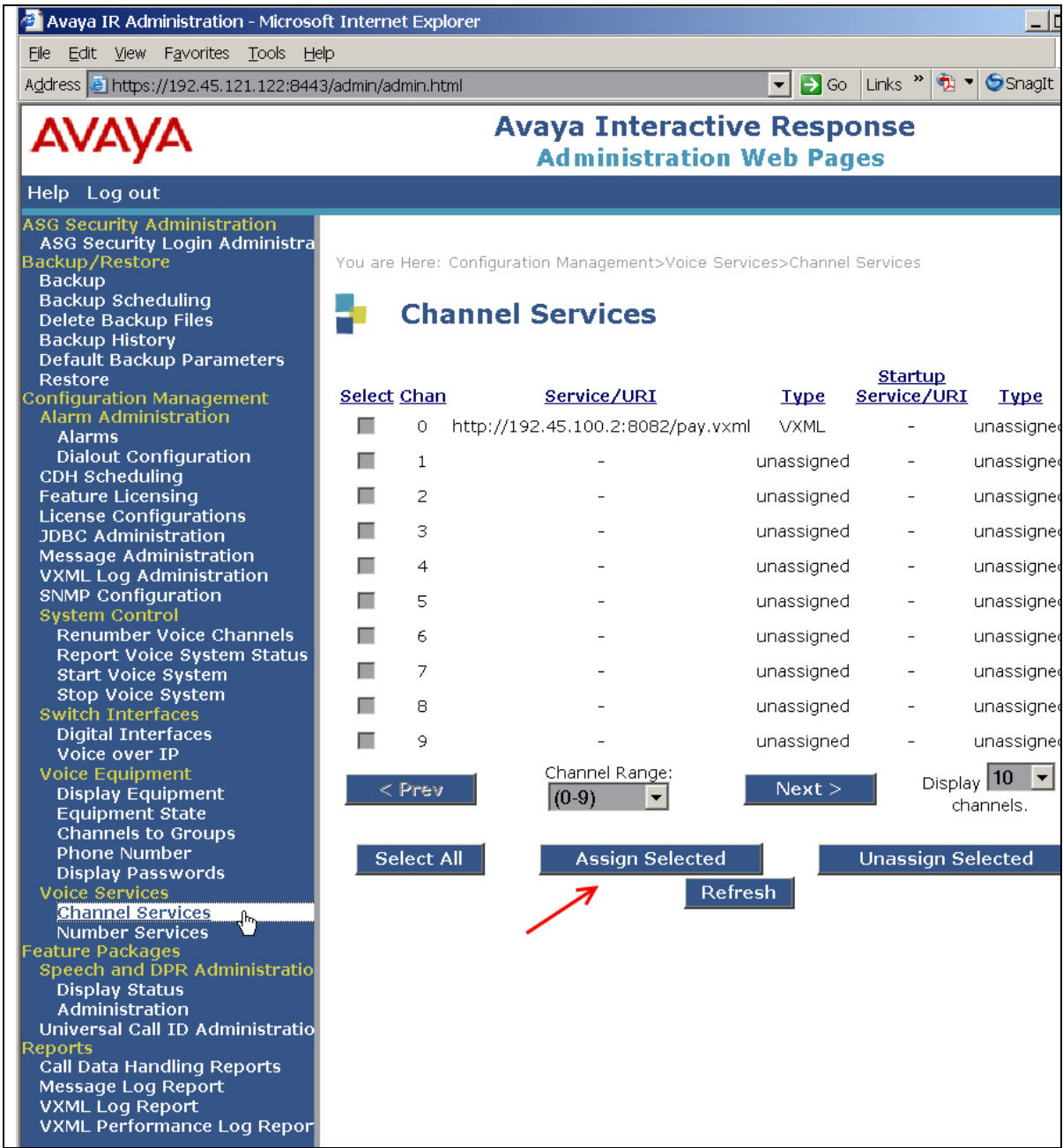
- ASG Security Administration**
 - ASG Security Login Administration
- Backup/Restore**
 - Backup
 - Backup Scheduling
 - Delete Backup Files
 - Backup History
 - Default Backup Parameters
 - Restore
- Configuration Management**
 - Alarm Administration**
 - Alarms
 - Dialout Configuration
 - CDH Scheduling
 - Feature Licensing
 - License Configurations
 - JDBC Administration
 - Message Administration
 - VXML Log Administration
 - SNMP Configuration
- System Control**
 - Renumber Voice Channels
 - Report Voice System Status
 - Start Voice System
 - Stop Voice System
- Switch Interfaces**
 - Digital Interfaces
 - Voice over IP
- Voice Equipment**
 - Display Equipment
 - Equipment State
 - Channels to Groups
 - Phone Number
 - Display Passwords
- Voice Services**
 - Channel Services
 - Number Services
- Feature Packages**
 - Speech and DPR Administration**
 - Display Status
 - Administration
 - Universal Call ID Administration
- Reports**
 - Call Data Handling Reports
 - Message Log Report
 - VXML Log Report
 - VXML Performance Log Report

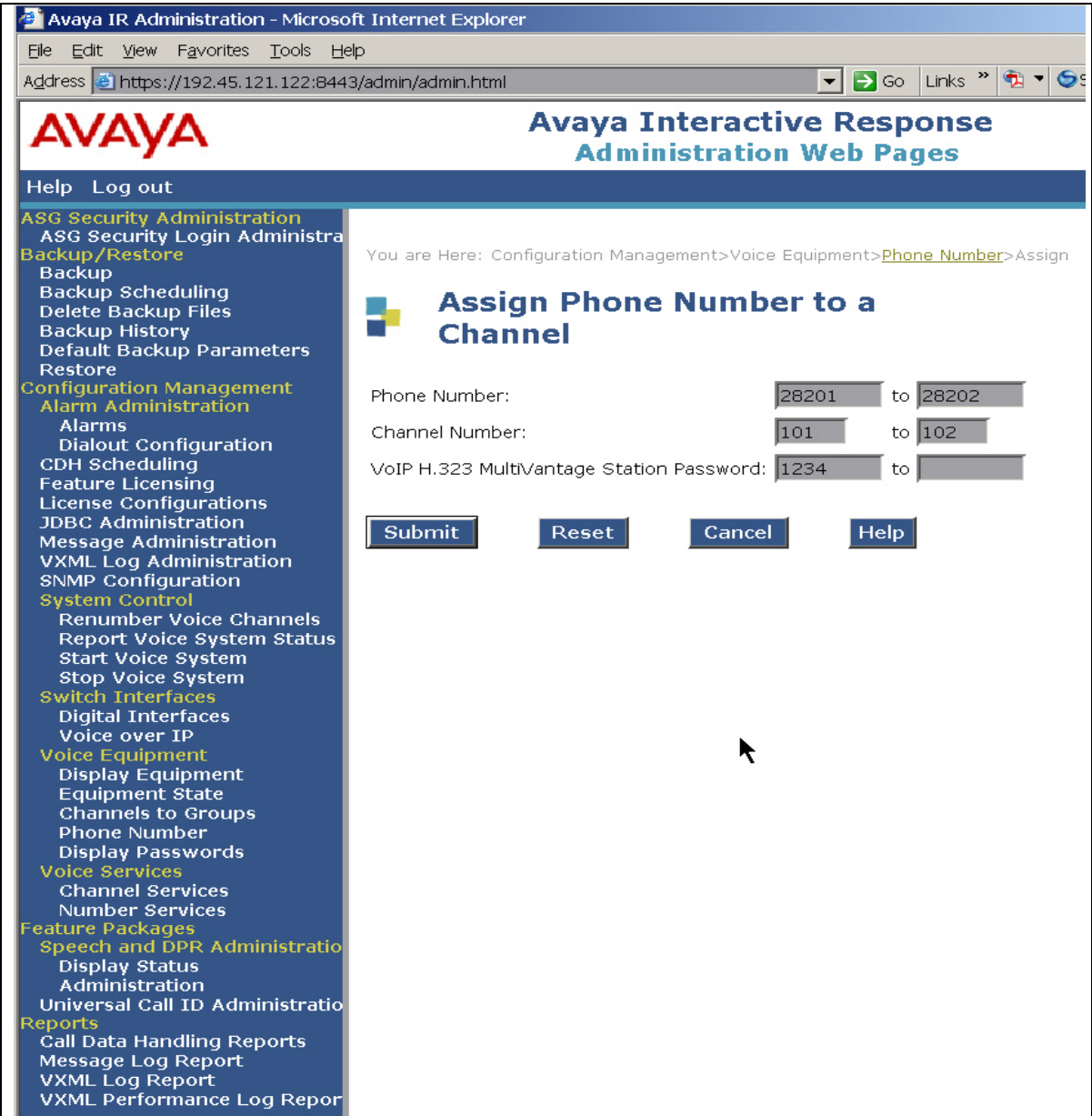
You are Here: Configuration Management>Switch Interfaces>Voice over IP>Change Parameters for Card 7

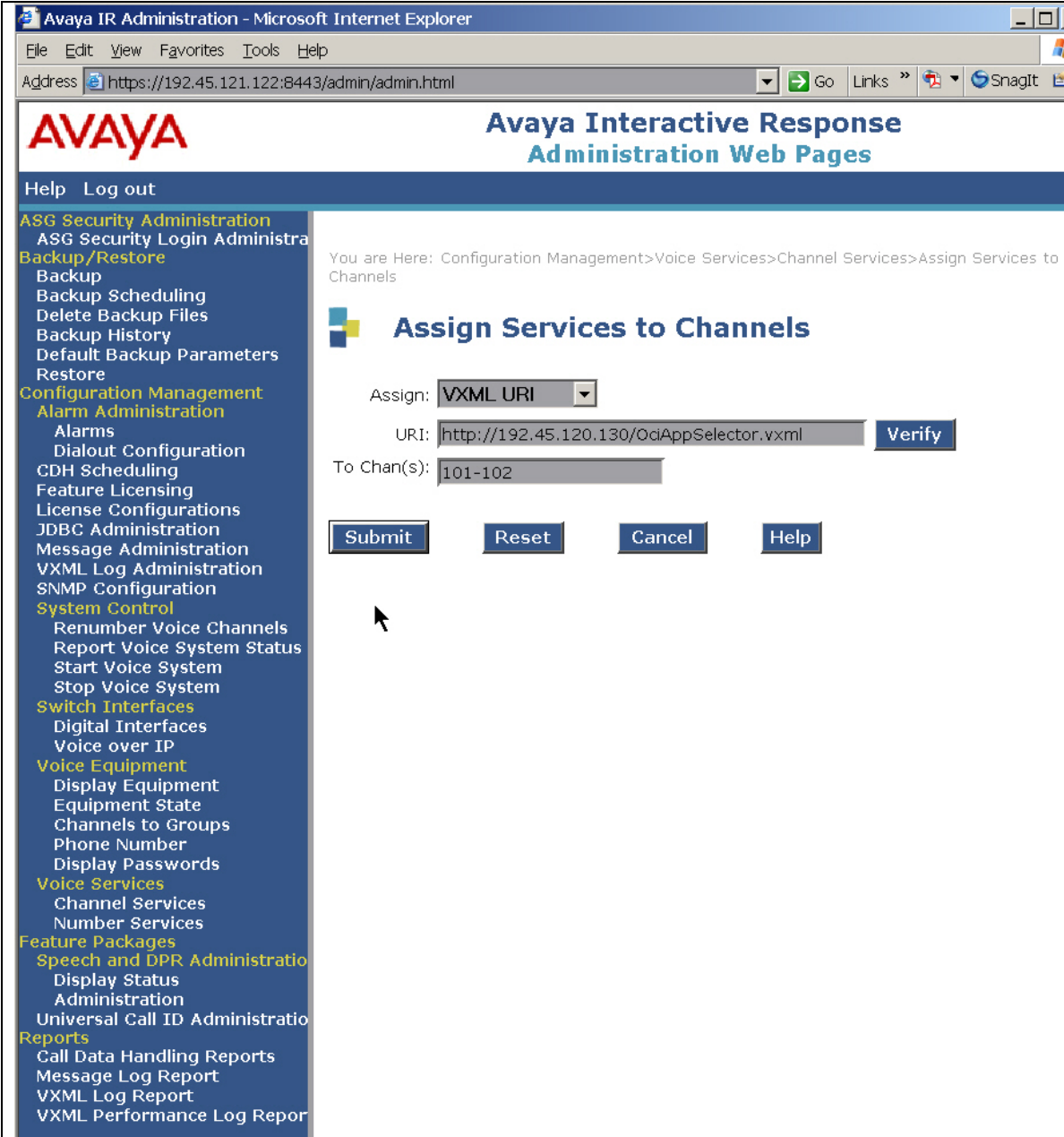
Change VoIP Parameters for Card 7

Card Name:	<input type="text" value="Ontira"/>
Card Enabled?:	<input type="button" value="yes"/>
Card IP Address:	<input type="text" value="192.45.121.122"/>
Gatekeeper IP Address:	<input type="text" value="192.45.100.70"/>
H.323 Gatekeeper Port:	<input type="text" value="1719"/>
Low RTP Port:	<input type="text" value="8000"/>
High RTP Port:	<input type="text" value="10000"/>
RTP Packet Size:	<input type="button" value="50"/>
RTCP Monitor Enabled?:	<input type="button" value="no"/>
RTCP Monitor IP Address:	<input type="text" value="127.0.0.0"/>
RTCP Monitor Port:	<input type="text" value="5005"/>
Station Authentication Enabled?:	<input type="button" value="yes"/>
Avaya CM Name:	<input type="text" value="CM7"/>
No of Ports:	<input type="text" value="5"/>
Avaya CM Version:	<input type="button" value="3.0"/>
Media Encryption:	<input type="button" value="Disabled"/>

If changes are made to the form, click the “**Submit**” button, otherwise click “**Cancel**” to return to the main page.

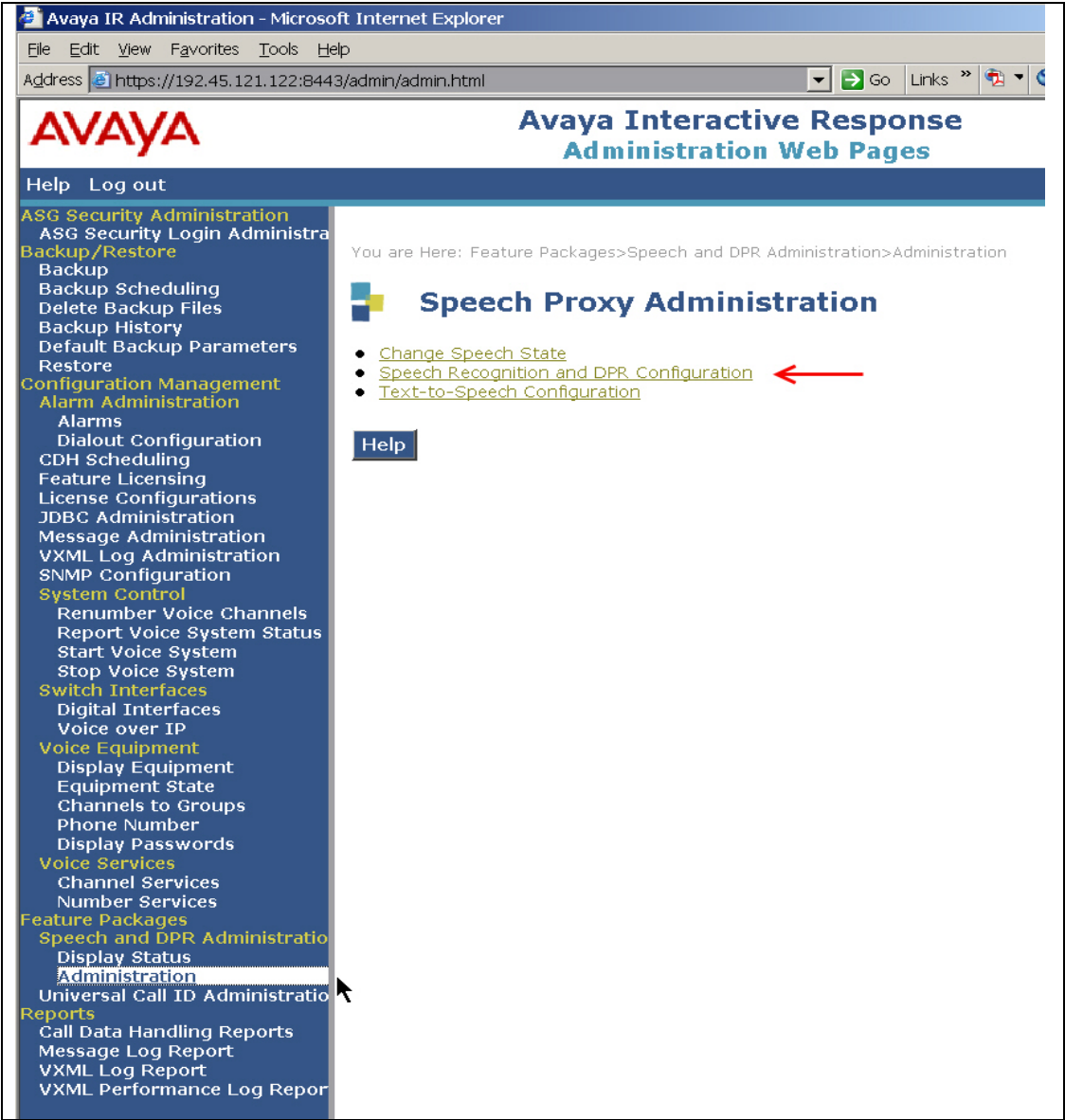
Step	Description
4.	<p>The last step to configure a VoIP card is to assign the VXML service that will be invoked when an incoming call is received. Click the “Channel Services” menu, then click the “Assign Selected” button.</p> 

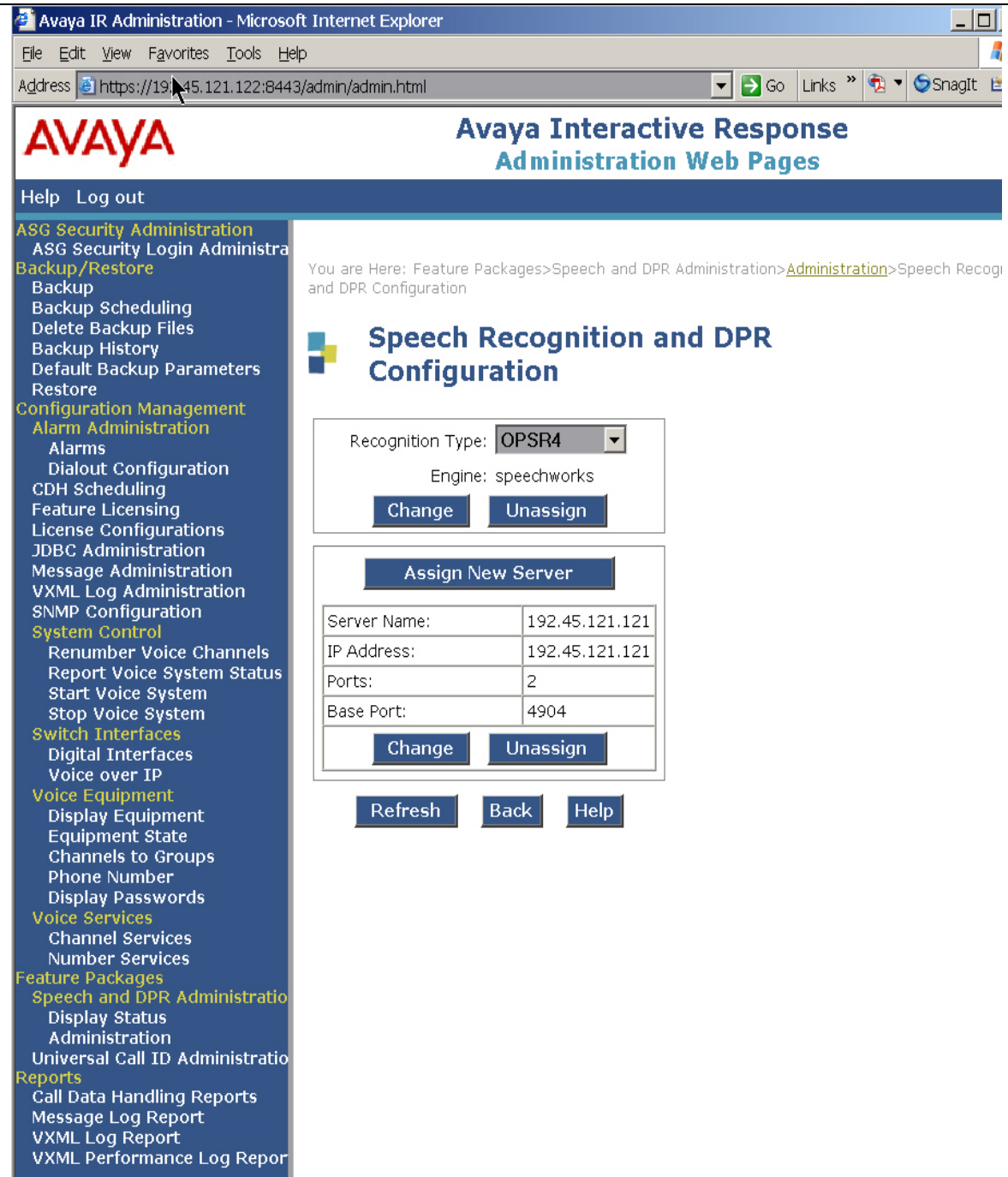
Step	Description
5.	<p>Assign phone numbers to each channel. Click the “Phone Number” option under the “Voice Equipment” menu, then select the “Assign” link to activate the page shown below. In this example, card 7 was assigned channels 101 through 102. The channel assignments can be viewed with the “Display Equipment” menu item (see Verification Section 7.1 for a sample screen-shot). The phones numbers and station passwords match the IP stations that were added to Avaya Communication Manager in Section 3.1.3.</p> 


Step	Description
6.	<p>In this example, a VXML script is assigned to all of the incoming channels. Set “Assign” to “VXML URI” from the pull down menu, set “URI” to the address of the initial application page, and set “To Chans(s)” to the channels that are assigned to the Ontira iEngine application. Click the “Submit” button to save any changes.</p>  <p>The screenshot shows the Avaya IR Administration web interface. The browser title is "Avaya IR Administration - Microsoft Internet Explorer". The address bar shows "https://192.45.121.122:8443/admin/admin.html". The page header includes the Avaya logo and "Avaya Interactive Response Administration Web Pages". The left sidebar lists various administration tasks. The main content area is titled "Assign Services to Channels" and includes the following configuration details:</p> <ul style="list-style-type: none"> You are Here: Configuration Management>Voice Services>Channel Services>Assign Services to Channels Assign: VXML URI (selected from a dropdown menu) URI: http://192.45.120.130/OciAppSelector.vxml To Chan(s): 101-102 Buttons: Verify, Submit, Reset, Cancel, Help


4.4. Configure Avaya Interactive Response Speech Recognition and Text-To-Speech Resources

The Ontira applications use Scansoft speech recognition and text-to-speech features. The Avaya Interactive Response allocates speech resources dynamically during the execution of a VXML application. These resources reside on external servers and are accessed via IP connections.

Step	Description
1.	<p>Configure the speech recognition configuration. Click the “Administration” menu item under the “Speech and DPR Administration” section, then click the “Speech Recognition and DPR Configuration” link.</p> 

Step	Description								
2.	<p>In this example, a Scansoft Speechworks OSR server has been configured. The “Recognition Type” of “OPSR4” is the default name of the first “Speechworks” engine. The “IP Address” and “Base Port” entries point to the external server that is providing the OSR service. The “Ports” value is the maximum number of channels the Avaya Interactive Response can use.</p>  <p>The screenshot displays the Avaya IR Administration web interface. The browser window is titled "Avaya IR Administration - Microsoft Internet Explorer". The address bar shows the URL "https://192.45.121.122:8443/admin/admin.html". The page header includes the Avaya logo and the title "Avaya Interactive Response Administration Web Pages". A navigation sidebar on the left lists various administrative functions, including ASG Security Administration, Configuration Management, System Control, Switch Interfaces, Voice Equipment, Voice Services, Feature Packages, and Reports. The main content area is titled "Speech Recognition and DPR Configuration". It shows the "Recognition Type" set to "OPSR4" and the "Engine" set to "speechworks". Below this, there is an "Assign New Server" section with a table containing the following information:</p> <table border="1"> <tr> <td>Server Name:</td> <td>192.45.121.121</td> </tr> <tr> <td>IP Address:</td> <td>192.45.121.121</td> </tr> <tr> <td>Ports:</td> <td>2</td> </tr> <tr> <td>Base Port:</td> <td>4904</td> </tr> </table> <p>Buttons for "Change", "Unassign", "Assign New Server", "Refresh", "Back", and "Help" are visible at the bottom of the configuration section.</p>	Server Name:	192.45.121.121	IP Address:	192.45.121.121	Ports:	2	Base Port:	4904
Server Name:	192.45.121.121								
IP Address:	192.45.121.121								
Ports:	2								
Base Port:	4904								


Step	Description
3.	<p>Verify the text-to-speech configuration. Click the “Administration” menu item under the “Speech and DPR Administration” section, then click the “Text-to-Speech Configuration” link.</p> 

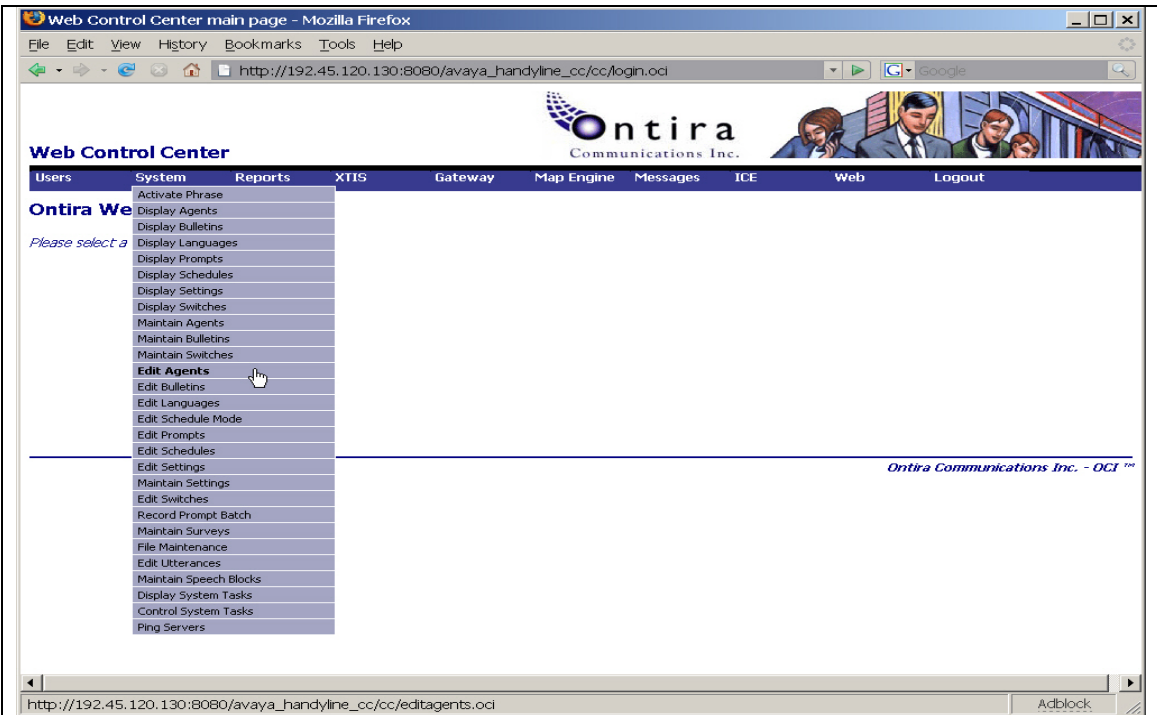

Step	Description
4.	<p>In this example, a Scansoft Speechify TTS server has been configured. The “Recognition Type” of “TTS0” is the default name of the first “Speechify” engine. The “IP Address” and “Base Port” entries point to the external server that is providing the TTS service. The “Ports” value is the maximum number of channels the Avaya Interactive Response can use.</p> 

5. Configure Ontira Media Engine and DataTalker Gateway

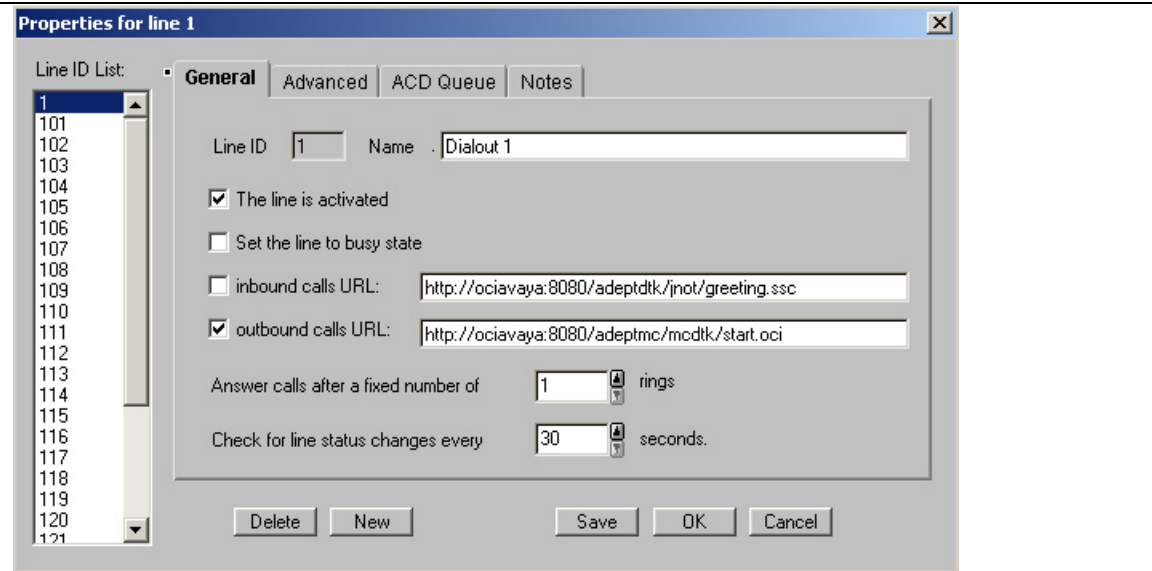
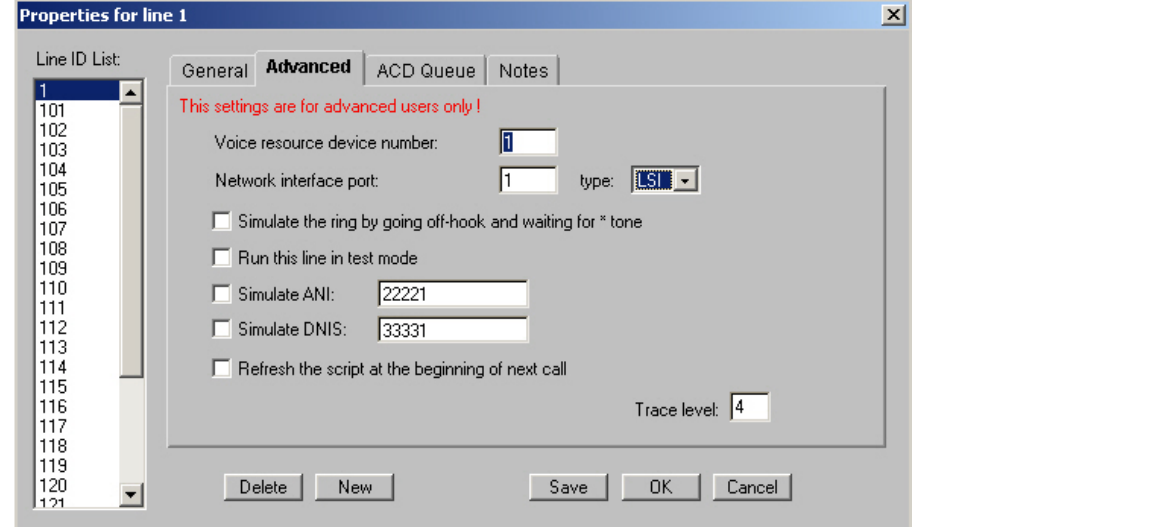
The Ontira iEngine IVR Suite is delivered as a turnkey custom application. For this sample installation, the only onsite configuration needed was the addition of a live agent extension to the Media Engine and the analog line connected to the DataTalker Gateway.

5.1. Add Media Engine Live Agent Extension

Step	Description
1.	<p>Open a web browser and access the Ontira Web Control Center. Enter the “Name” and “Password” of an administrator account, then click the “Submit” button.</p> 

Step	Description
2.	<p>Select the “System” menu on the main page, then click the “Edit Agents” entry.</p> 
3.	<p>Enter a local extension number that will receive calls when an application transfers to a live agent. In this example, set “Transfer Open Number” and “Transfer Close Number” to “24147” and click the “Save” button.</p> 

5.2. Configure DataTalker Gateway Analog Line Properties

Step	Description
1.	<p>On the Web Control Center main page, select the “Gateway” menu to configure the analog line properties. On the “General” tab of the properties window, select the first entry in the “Line ID List”. Click the radio button next to “The line is activated” to enable this line. Click the radio button next to “outbound calls URL” and fill in the location of the “start.oci” application.</p> 
2.	<p>Click on the “Advanced” tab. Set “Network interface port” to “1” and choose “LSI” from the “type” pull down menu. Click the “Save” button to save the configuration and return to the main page.</p> 

6. Interoperability Compliance Testing

The interoperability compliance test included feature function and serviceability testing. Feature function testing focused on verifying the interaction of the Ontira Media Gateway and the Avaya Interactive Response. The interaction of the Ontira DataTalker Gateway and the Avaya Communication Manager was also verified. Serviceability testing verified that Ontira server recovered from adverse conditions, such as rebooting and line disconnects.

6.1. General Test Approach

Manual test calls were placed to sample applications to verify that the Ontira solution successfully delivers speech-enabled applications. Response times to user input and speech recognition accuracy was observed. The ability to schedule and generate outgoing system notifications was also verified.

6.2. Test Results

All of the feature function and serviceability test cases passed. The Ontira iEngine IVR Suite solution successfully supports the Avaya Interactive Response platform. For serviceability testing, callers were notified by Avaya Interactive Response when the Ontira Media Gateway was disconnected or not in service and normal call handling returned automatically when the Ontira Media Gateway was brought back into service.

7. Verification Steps

7.1. Verify the Avaya Interactive Response Resources

The H.323, ASR, and TTS ports must be active and in-service before calls can be processed. Log in to Avaya Interactive Response Web Administration page as show in section 4.1.

Step	Description
1.	Verify that the H.323 VoIP ports are in-service. Select “ Display Equipment ” from the menu on the left side of the page. Verify that the “ STATE ” of card 7 is “ Inserv ”. Also verify channels 101 and 102 are “ Inserv ”.

Avaya IR Administration - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address https://192.45.121.122:8443/admin/admin.html Go Links Snagit

AVAYA

Avaya Interactive Response
Administration Web Pages

Help Log out

ASG Security Administration

ASG Security Login Administration

Backup/Restore

Backup

Backup Scheduling

Delete Backup Files

Backup History

Default Backup Parameters

Restore

Configuration Management

Alarm Administration

Alarms

Dialout Configuration

CDH Scheduling

Feature Licensing

License Configurations

JDBC Administration

Message Administration

VXML Log Administration

SNMP Configuration

System Control

Renumber Voice Channels

Report Voice System Status

Start Voice System

Stop Voice System

Switch Interfaces

Digital Interfaces

Voice over IP

Voice Equipment

Display Equipment

Equipment State

Channels to Groups

Phone Number

Display Passwords

Voice Services

Channel Services

Number Services

Feature Packages

Speech and DPR Administration

Display Status

Administration

Universal Call ID Administration

Reports

Call Data Handling Reports

Message Log Report

VXML Log Report

VXML Performance Log Report

2489Manoos- -2talk LOOP

2490Manoos- -2talk LOOP

2491Manoos- -2talk LOOP

2492Manoos- -2talk LOOP

2493Manoos- -2talk LOOP

2494Manoos- -2talk LOOP

2495Manoos- -2talk LOOP

CARD 6 STATE: Inserv CLASS: VoIP (H.323) O.S.INDEX: 6

NAME: VH323 OPTIONS: no clocking, no tdm

FUNCTION: H.323

CARD TRUNK PORT CHAN STATE SERVICE-NAME PHONE GROUP OPTS PROTOCOL

61096 Inserv blindxfr 24444* 2talk H323

61197 Foos blindxfr - 2talk H323

61298 Foos blindxfr - 2talk H323

61399 Foos blindxfr - 2talk H323

614100 Foos avftst - 2talk H323

CARD 7 STATE: Inserv CLASS: VoIP (H.323) O.S.INDEX: 7

NAME: wcd7 OPTIONS: no clocking, no tdm

FUNCTION: H.323

CARD TRUNK PORT CHAN STATE SERVICE-NAME PHONE GROUP OPTS PROTOCOL

710101 Inserv AVAYAVXI1 28201* 2talk H323

711102 Inserv AVAYAVXI2 28202* 2talk H323

712103 Foos AVAYAVXI3 - 2talk H323

713104 Foos - 2talk H323

714105 Foos - 2talk H323

CARD 8 STATE: Inserv CLASS: VoIP (H.323) O.S.INDEX: 8

NAME: TaiLi8 OPTIONS: no clocking, no tdm

FUNCTION: H.323

CARD TRUNK PORT CHAN STATE SERVICE-NAME PHONE GROUP OPTS PROTOCOL

810106 Inserv - 22771* 2talk H323

811107 Inserv AVAYAVXI4 22772* 2talk H323

812108 Inserv AVAYAVXI5 22773* 2talk H323

813109 Inserv AVAYAVXI0 22774* 2talk H323

814110 Foos - 2talk H323

CARD 9 STATE: Foos CLASS: VoIP (H.323) O.S.INDEX: 9

NAME: Kris1 OPTIONS: no clocking, no tdm

FUNCTION: H.323

CARD TRUNK PORT CHAN STATE SERVICE-NAME PHONE GROUP OPTS PROTOCOL


910111 Foos AVAYAVXI1 - 2talk H323

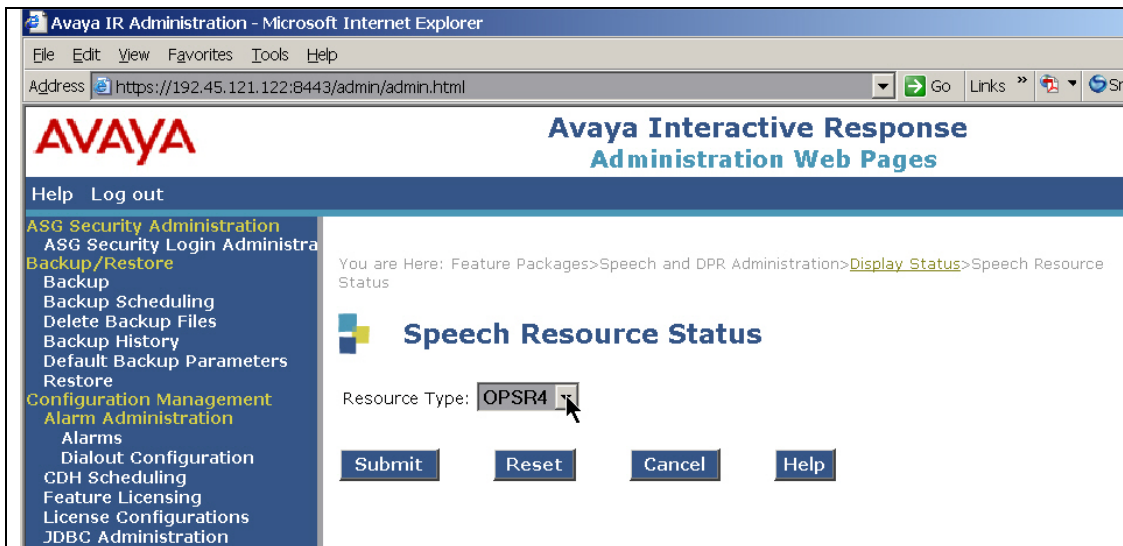
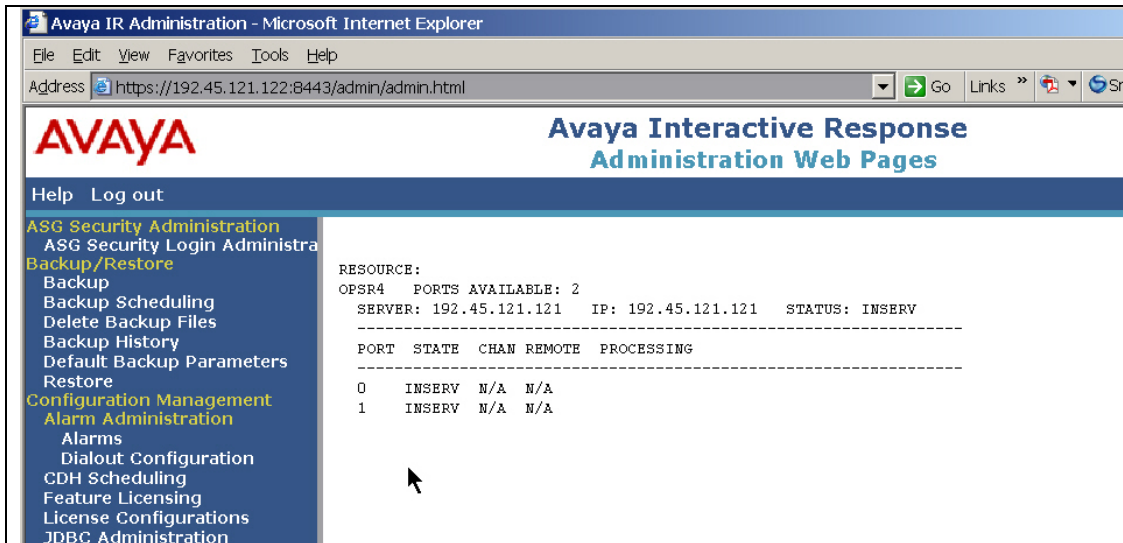
911112 Foos - 2talk H323

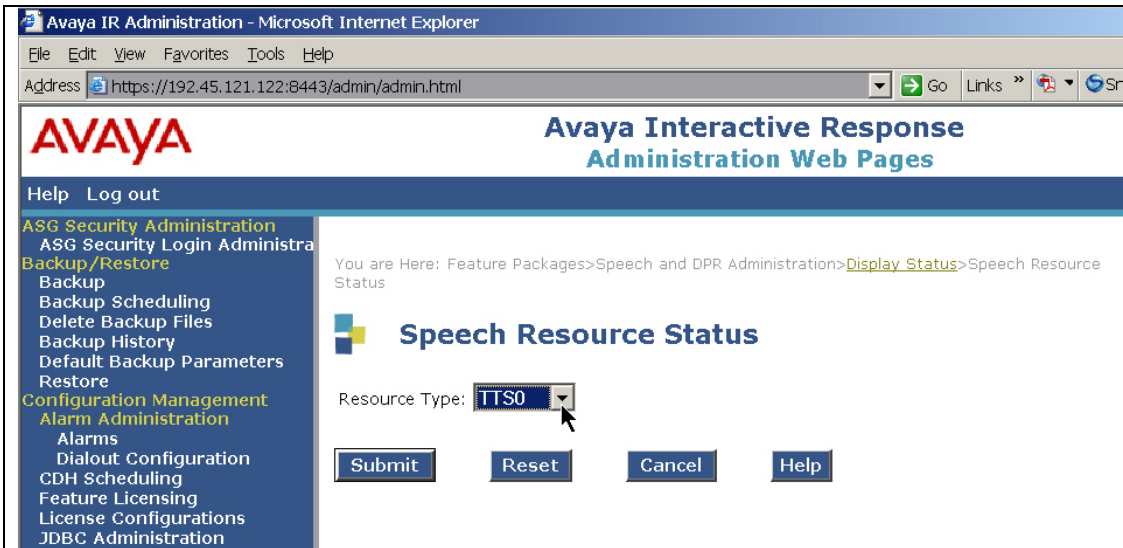
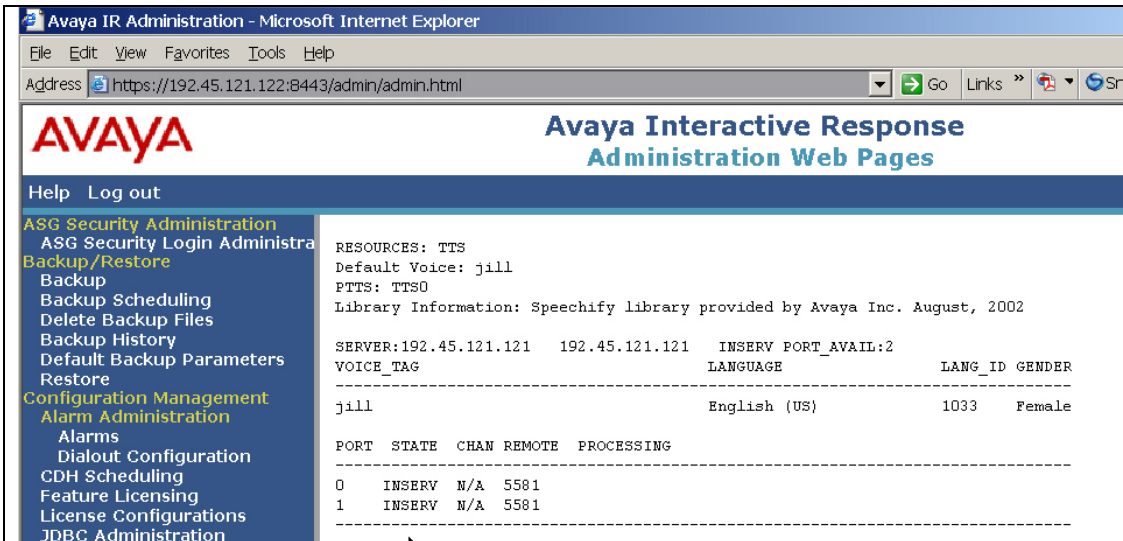
912113 Foos - 2talk H323

913114 Foos - 2talk H323

914115 Foos - 2talk H323

Step	Description
2.	<p>Verify that the ASR ports are in-service. Select “Display Status” from the menu on the left side of the page, then click the “Speech Resource Status” link.</p>
	 <p>The screenshot shows the Avaya IR Administration web interface. The browser window is titled "Avaya IR Administration - Microsoft Internet Explorer". The address bar displays "https://192.45.121.122:8443/admin/admin.html". The page features the Avaya logo and the title "Avaya Interactive Response Administration Web Pages". A navigation menu on the left lists various administration options, including "ASG Security Administration", "Backup/Restore", "Configuration Management", "System Control", "Switch Interfaces", "Voice Equipment", "Voice Services", "Feature Packages", "Reports", and "Speech and DPR Administration". The "Speech and DPR Administration" section is expanded, showing "Display Status" and "Administration". The main content area displays "Display Speech Proxy Status" with a breadcrumb trail "You are Here: Feature Packages>Speech and DPR Administration>Display Status". Below this, there are two links: "Speech Resource Status" and "Speech Server Status". A mouse cursor is pointing at the "Speech Resource Status" link. A "Help" button is also visible.</p>

Step	Description
3.	<p>On the “Resource Type” pull down menu, select “OPSR4” and click the “Submit” button.</p> <div></div>
4.	<p>Verify that the “SERVER” status is “INSERV” and that the “STATE” of all the ports is “INSERV”.</p> <div></div>

Step	Description
5.	<p>On the “Resource Type” pull down menu, select “TTS0” and click the “Submit” button.</p> 
6.	<p>Verify that the “SERVER” status is “INSERV” and that the “STATE” of all the ports is “INSERV”.</p> 

7.2. Verify Ontira iEngine Interaction with Avaya Interactive Response and Avaya Communication Manager

The Ontira iEngine IVR Suite was installed with two sample applications. The BusLine application provided schedule information for a sample Transit Authority Bus system. The HandyLine application provided trip scheduling services for a sample paratransit service. To

verify proper interaction with Avaya Interactive Response and Avaya Communication Manager, test calls were placed to exercise the major functions of the application call flows.

7.2.1. Test Call Scenarios for the HandyLine Application

The HandyLine application was used to verify the overall interaction of the Ontira iEngine with the Avaya Interactive Response. The trip scheduling call flow uses all the major functions of the system. The speech recognition grammars must be able to collect time, date, and location information to book a trip. When a trip is booked, confirmation and reminder calls can be scheduled which are then handled by the outcalling feature of the DataTalker Gateway.

7.2.1.1 Verify System Access and Agent Transfer

- Dial the hunt-group number, 28200, say “My Trips” to select HandyLine.
- While listening to the main menu, say “Customer Service”. Verify the call is successfully transferred to the agent extension configured in Section 5.1.

7.2.1.2 Verify Trip Scheduling and Reminders

- Dial the hunt-group number, 28200, say “My Trips” to select HandyLine.
- At the main menu prompt, say “Book a Trip”.
- Login using an existing user-id and password.
- Navigate the menu prompts to specify date, time, and location of pickup and destination addresses. Verify the recognitions are accurate.
- Request a confirmation call be made to the home telephone number for this user-id.
- Verify that the DataTalker Gateway places an outbound call within five minutes. Answer the call and verify that the trip summary is correct.

7.2.1.3 Verify Trip Scheduling Confirm and Cancel Functions

- Dial the hunt-group number, 28200, say “My Trips” to select HandyLine.
- At the main menu prompt, say “Confirm a Trip”.
- Login using an existing user-id and password, verify that the trip summary is correct.
- Say, “Main Menu”, verify the call continues at the main menu.
- Say, “Cancel a Trip”, verify the trip summary is correct.
- Say, “Cancel”, while system is asking to confirm the cancel request, press the “1” key on the telephone keypad, verify that DTMF barge-in works and the system prompts you to hold while the trip cancellation request is completed. When the trip has been cancelled, say “Main Menu”, verify the call continues at the main menu.
- Say, “Confirm a Trip”, verify the system has no scheduled trips.

7.2.2. Test Call Scenario for the BusLine Application.

The BusLine application was used to verify the proper interaction of the system when a very large speech recognition grammar is used. A sample grammar containing 13,969 street intersections for the city of Las Vegas was used. A grammar this size could take several minutes to compile and must be pre-compiled to avoid unacceptable holding times.

- Dial hunt-group number, 28200, say “Bus time” to select BusLine

- At the main menu prompt, say “Stop Times”.
- At the get location type prompt, say “Intersections”.
- When prompted for street names, say “Rainbow and Flamingo”.
- Verify that the recognition was accurate and there was only a slight delay.
- At the confirmation prompt, say “No” to try again.
- When prompted for street names, give an invalid response, say “123 and 321”.
- Verify that the recognition fails and there was only a slight delay.
- Say “Main Menu” to return the main menu.
- Say “Goodbye” or hang-up to end the call.

8. Support

Technical support for Ontira iEngine IVR Suite can be obtained by contacting the Ontira Customer Service Center.

- Monday-Friday (excluding holidays): 9am - 5pm PST
By E-mail: support@ontira.com
- By Telephone: 604-669-1070 ext.2
24/7 Toll-free Support Hotline: 1-877-278-2599

9. Conclusion

These Application Notes present the required configuration steps of Avaya Interactive Response, Avaya Communication Manager, Ontira Media Engine, and Ontira DataTalker Gateway. The configuration described in these application notes has been successfully compliance tested.

10. Additional References

The following reference can be found at the Avaya support site, <http://support.avaya.com>

[1] Avaya Interactive Response Release 2.0 Administration Guide, Issue 1.0, April 2006

The following references are available as part of the Ontira iEngine IVR Suite software delivery and integration process.

[2] Ontira iEngine IVR Suite Overview, Release 1.01, October 2006

[3] Ontira HandyLine Module, Call Flow, Version 3.0, October 2006

[4] Ontira iEnging IVR Suite Test Plan, Version 1.00, October 2006

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