



Avaya Solution & Interoperability Test Lab

Application Notes for Avaya Voice Portal 5.0 with Dialogs Unlimited ImmediateVoice v2.0 Speech Application Engine - Issue 1.0

Abstract

These Application Notes describe the steps for configuring Avaya Voice Portal 5.0 with Dialogs Unlimited ImmediateVoice v2.0. Dialogs Unlimited has developed the ImmediateVoice platform and technology which enables the development and operation of Speech Applications based on existing or new e-commerce web sites. ImmediateVoice extracts the e-commerce interactions from the web pages, converts them into customer speech dialog and converts the speech back to the required data field inputs. This allows the original web e-commerce transaction to be completed by voice. In addition, ImmediateVoice has powerful online Service Creation tools that discover the customer interaction types automatically and allow for a Rapid Application Development with iterative quality improvements of the Speech Application. Avaya Voice Portal is a speech-enabled interactive voice response system that allows enterprises to provide multiple self and assisted service resources to their customers in a flexible and customizable manner.

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 steps for configuring Avaya Voice Portal 5.0 with Dialogs Unlimited ImmediateVoice v2.0 and Avaya Aura™ SIP Enablement Services based on SIP connectivity.

Dialogs Unlimited has developed the ImmediateVoice platform and technology which enables the development and operation of Speech Applications based on existing or new e-commerce web sites. ImmediateVoice is a web-based speech engine including web-based speech application design tools making it possible to design, develop and run speech applications based on existing self-service websites. ImmediateVoice has 2 basic components: Voice Transcoder (VT) that interprets webpages and converts to XML, and Dialogs Manager (NextIDM) that generates VXML 2.1 based on inputs from VT. The NextIDM component of ImmediateVoice interfaces with the Avaya Voice Portal via http and by submitting VXML2.1 scripts.

Avaya Voice Portal is a web-based and speech enabled interactive voice response system that is configured as an adjunct system on the SIP Enablement Services Home server. A SIP Enablement Services adjunct is an entity that provides services to the SIP Enablement Services Home server via a SIP interface. The Avaya Voice Portal system is composed of a Voice Portal Management System (VPMS) server, one or more Media Processing Platform (MPP) servers, and typically includes web-based application servers that provide automated speech recognition and text-to-speech services. The MPP provides media processor resources and is the proxy interface to the web-based application servers. In these Application Notes, the VPMS co-resident with MPP uses the SIP protocol to communicate with Avaya Aura™ Communication Manager via the SIP Enablement Services Home server. The VPMS provides centralized management for the MPP(s) and provides a web interface for administering the Avaya Voice Portal system. For Avaya Voice Portal, SIP Enablement Services delivers invites to the VPMS. ImmediateVoice utilises Avaya Voice Portal voice browser capability.

1.1. Interoperability Compliance Testing

The interoperability compliance testing focused on verifying interoperability of the Dialogs Unlimited ImmediateVoice with Avaya Voice Portal based on SIP connectivity. The focus of testing is VXML (CCXML) interoperability and support of major call functions like call pickup, call transfer, making inputs in the web forms by voice and web browsing by voice as per selected ImmediateVoice Speech Application scope.

1.2. Support

Technical support for the Avaya products can be obtained from Avaya. See the support link at support.avaya.com for contact information.

Technical support for the ImmediateVoice products can be obtained from Dialogs Unlimited. See the support link at www.dialogsunlimited.com for contact information.

2. Reference Configuration

The sample configuration used in these Application Notes is shown in **Figure 1** and consists of several components:

- Avaya Voice Portal provides interactive voice response services to inbound callers. Avaya Voice Portal consists of one or more Media Processing Platform (MPP) servers and a Voice Portal Management System (VPMS) server.
- Avaya Aura™ Communication Manager provides the enterprise voice communication services. In this sample configuration, Communication Manager runs on an Avaya S8500C Server. This solution is extensible to other Avaya S8xxx Servers.
- Avaya Media Gateway provides the physical interfaces and resources for enterprise voice communications. In this sample configuration, an Avaya G650 Media Gateway is used. This solution is extensible to other Avaya Media Gateways.
- SIP Enablement Services creates a SIP communication network supporting telephony. In this sample configuration, SIP Enablement Services runs on an Avaya S8510 Server.
- Avaya phones are represented with Avaya 16xx, 46xx and 96xx Series IP Telephones running H.323 software or SIP software.
- The Nuance Speech Server consists of Nuance OpenSpeech Recognizer and nuance RealSpeak. Avaya Voice Portal uses the Speech Server for Text-To-Speech (TTS) and Automatic Speech Recognition (ASR) capabilities.
- Dialogs Unlimited ImmediateVoice Speech Application Engine comes as a complete platform supporting Speech Application Creation, Service Monitoring, Content Management and Speech Engine.

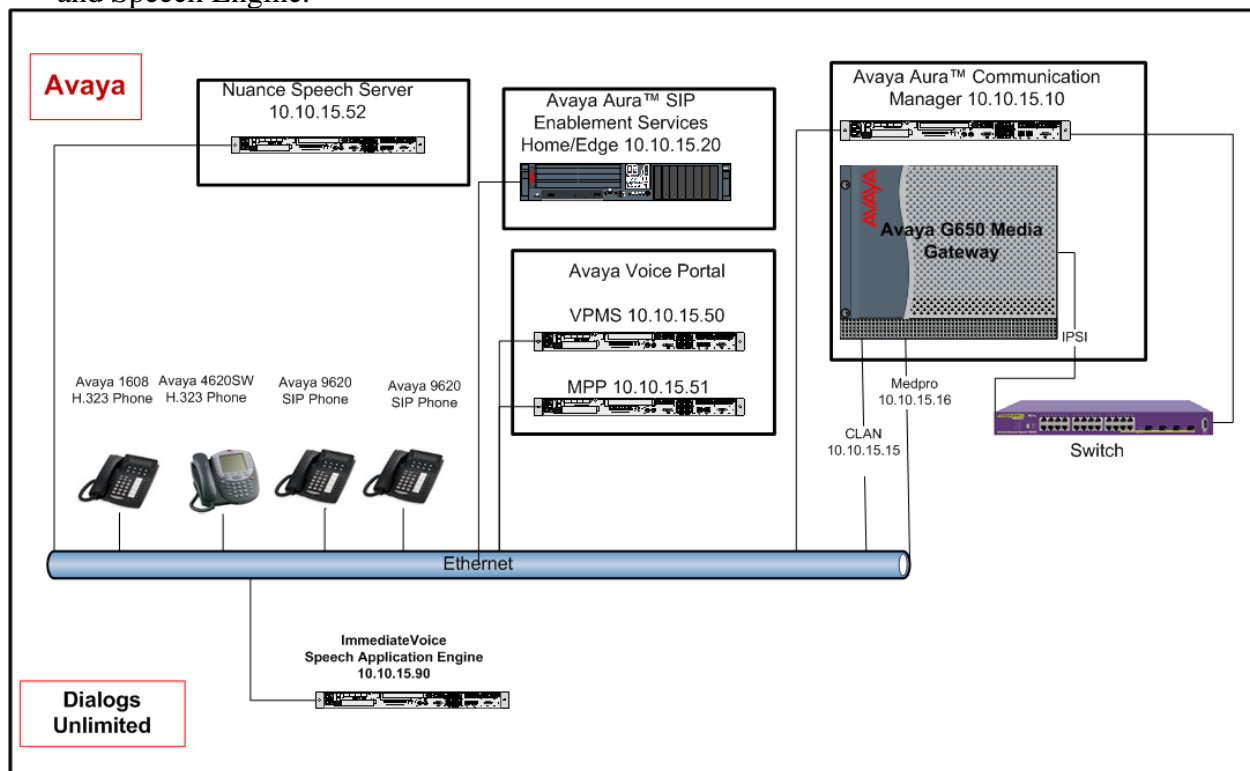


Figure 1: Avaya Voice Portal 5.0 with Dialogs Unlimited ImmediateVoice

3. Equipment and Software Validated

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

| Equipment | Software |
|--|---|
| Avaya S8500C Media Server with an Avaya G650 Media Gateway | Avaya Aura™ Communication Manager 5.2 (R015x.02.0.947.3-17250) |
| Avaya Voice Portal System VPMS Server MPP Server | Avaya Voice Portal 5.0 VPMS 5.0.0.0.4602 MPP 5.0.0.0.4603 |
| Avaya S8510 SIP Enablement Service (SES) Home/Edge combined Server | Avaya Aura™ SIP Enablement Services 5.2 SES-5.2.0.0-947.3b |
| Avaya 4620SW H.323 Phone | H.323 Release 2.9 |
| Avaya 1608 H.323 Phone | H.323 Release 1.2 |
| Avaya 9620 SIP Phone | Avaya one-X Deskphone Edition SIP Release 2.4.1 |
| Dialogs Unlimited ImmediateVoice Speech Application Engine | ImmediateVoice Speech Application Engine 2.0 |
| Nuance Speech Server (co-resident) Nuance RealSpeak Nuance OpenSpeech Recognizer | NSS 5.0.2 RealSpeak4.5 sp2 NRec9.0.3 |

4. Configure Avaya Aura™ Communication Manager

This section describes the administration steps for Communication Manager in support of the sample configuration described in these Application Notes. The steps are performed from the Communication Manager System Access Terminal (SAT) interface. These Application Notes assume that basic Communication Manager administration, including C-LAN, Media Processor, etc., has already been performed.

4.1. Communication Manager System Parameters

This section reviews the Communication Manager system parameters and features that are required for the sample configuration described in these Application Notes.

1. Enter the **display system-parameters customer-options** command. On **Page 1** of the form, verify that **Maximum Off-PBX Telephones - OPS:** is sufficient for the number of expected off-pbx stations.

| display system-parameters customer-options | | Page 1 of 10 |
|--|----------------------------|--------------|
| OPTIONAL FEATURES | | |
| G3 Version: V15 | Software Package: Standard | |
| Location: 1 | RFA System ID (SID): 1 | |
| Platform: 12 | RFA Module ID (MID): 1 | |
| | USED | |
| Platform Maximum Ports: 44000 | 92 | |
| Maximum Stations: 36000 | 15 | |
| Maximum XMOBILE Stations: 0 | 0 | |
| Maximum Off-PBX Telephones - EC500: 0 | 0 | |
| Maximum Off-PBX Telephones - OPS: 100 | 0 | |
| Maximum Off-PBX Telephones - PBFMC: 0 | 0 | |
| Maximum Off-PBX Telephones - PVFMC: 0 | 0 | |
| Maximum Off-PBX Telephones - SCCAN: 0 | 0 | |

On **Page 2** of the form, verify that **Maximum Administered SIP Trunks** number is sufficient for the number of expected SIP trunks.

| display system-parameters customer-options | | Page 2 of 10 |
|---|-----------|--------------|
| OPTIONAL FEATURES | | |
| IP PORT CAPACITIES | USED | |
| Maximum Administered H.323 Trunks: 100 | 0 | |
| Maximum Concurrently Registered IP Stations: 18000 | 8 | |
| 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: 0 | 0 | |
| Maximum Video Capable H.323 Stations: 0 | 0 | |
| Maximum Video Capable IP Softphones: 0 | 0 | |
| Maximum Administered SIP Trunks: 100 | 48 | |
| Maximum Administered Ad-hoc Video Conferencing Ports: 0 | 0 | |
| Maximum Number of DS1 Boards with Echo Cancellation: 0 | 0 | |
| Maximum TN2501 VAL Boards: 10 | 0 | |
| Maximum Media Gateway VAL Sources: 0 | 0 | |
| Maximum TN2602 Boards with 80 VoIP Channels: 128 | 0 | |
| Maximum TN2602 Boards with 320 VoIP Channels: 128 | 1 | |
| Maximum Number of Expanded Meet-me Conference Ports: 0 | 0 | |

On **Page 3** of the **system-parameters customer-options** form, verify that the bolded field in the following screenshot is set to **y**.

| display system-parameters customer-options | | Page 3 of 10 |
|--|-------------------------------------|--------------|
| OPTIONAL FEATURES | | |
| Abbreviated Dialing Enhanced List? n | Audible Message Waiting? n | |
| Access Security Gateway (ASG)? n | Authorization Codes? n | |
| Analog Trunk Incoming Call ID? n | CAS Branch? n | |
| A/D Grp/Sys List Dialing Start at 01? n | CAS Main? n | |
| Answer Supervision by Call Classifier? n | Change COR by FAC? n | |
| ARS? y | Computer Telephony Adjunct Links? n | |
| ARS/AAR Partitioning? y | Cvg Of Calls Redirected Off-net? n | |
| ARS/AAR Dialing without FAC? y | DCS (Basic)? y | |
| ASAI Link Core Capabilities? n | DCS Call Coverage? n | |
| ASAI Link Plus Capabilities? n | DCS with Rerouting? n | |
| Async. Transfer Mode (ATM) PNC? n | Digital Loss Plan Modification? n | |
| Async. Transfer Mode (ATM) Trunking? n | DS1 MSP? n | |
| ATM WAN Spare Processor? n | DS1 Echo Cancellation? n | |
| ATMS? n | | |
| Attendant Vectoring? n | | |

On **Page 4** of the **system-parameters customer-options** form, verify that **IP Trunks** is set to **y**. If **Media Encryption Over IP** is set to **y**, it will allow for SRTP media encryption on calls routed to Avaya Voice Portal system, in this case the respective security certificates need to be installed. In this sample configuration, it is set to **n**.

| display system-parameters customer-options | | Page 4 of 10 |
|--|---|--------------|
| OPTIONAL FEATURES | | |
| Emergency Access to Attendant? y | IP Stations? y | |
| Enable 'dadmin' Login? y | | |
| Enhanced Conferencing? y | ISDN Feature Plus? n | |
| Enhanced EC500? y | ISDN/SIP 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? y | Multimedia Call Handling (Basic)? n | |
| Hospitality (Basic)? y | Multimedia Call Handling (Enhanced)? n | |
| Hospitality (G3V3 Enhancements)? n | Multimedia IP SIP Trunking? n | |
| IP Trunks? y | | |
| IP Attendant Consoles? n | | |

On **Page 5** of the **system-parameters customer-options** form, verify that **Private Networking** and **Uniform Dialing Plan** are set to **y**.

| display system-parameters customer-options | | Page 5 of 10 |
|--|------------------------------------|--------------|
| OPTIONAL FEATURES | | |
| Multinational Locations? n | Station and Trunk MSP? n | |
| Multiple Level Precedence & Preemption? n | Station as Virtual Extension? n | |
| Multiple Locations? n | | |
| Personal Station Access (PSA)? n | System Management Data Transfer? n | |
| PNC Duplication? n | Tenant Partitioning? n | |
| Port Network Support? y | Terminal Trans. Init. (TTI)? n | |
| Posted Messages? n | Time of Day Routing? n | |
| | TN2501 VAL Maximum Capacity? y | |
| | Uniform Dialing Plan? y | |
| Private Networking? y | Usage Allocation Enhancements? y | |
| Processor and System MSP? n | | |
| Processor Ethernet? y | Wideband Switching? n | |
| | Wireless? n | |
| Remote Office? n | | |
| Restrict Call Forward Off Net? y | | |
| Secondary Data Module? y | | |

2. Enter the **display feature-access-codes** command.

On **Page 1** of the form, verify that **Auto Alternate Routing (AAR) Access Code** is set, in this sample configuration, it is set to ***8**.

| display feature-access-codes | | Page 1 of 6 |
|---|----------------|-------------|
| FEATURE ACCESS CODE (FAC) | | |
| Abbreviated Dialing List1 Access Code: | | |
| Abbreviated Dialing List2 Access Code: | | |
| Abbreviated Dialing List3 Access Code: | | |
| Abbreviated Dial - Prgm Group List Access Code: | | |
| Announcement Access Code: | | |
| Answer Back Access Code: | | |
| Attendant Access Code: | | |
| Auto Alternate Routing (AAR) Access Code: *8 | | |
| Auto Route Selection (ARS) - Access Code 1: | Access Code 2: | |
| Automatic Callback Activation: | Deactivation: | |
| Call Forwarding Activation Busy/DA: All: | Deactivation: | |
| Call Forwarding Enhanced Status: Act: | Deactivation: | |
| Call Park Access Code: | | |
| Call Pickup Access Code: | | |
| CAS Remote Hold/Answer Hold-Unhold Access Code: | | |
| CDR Account Code Access Code: | | |
| Change COR Access Code: | | |
| Change Coverage Access Code: | | |
| Conditional Call Extend Activation: | Deactivation: | |
| Contact Closure Open Code: | Close Code: | |

4.2. Configure SIP trunk to SIP Enablement Services

This section describes the administration on Communication Manager that need be performed to set up a SIP trunk to SIP Enablement Services Home server.

1. Enter command **change node-name ip** to assign the node names for the C-LAN board and SIP Enablement Services Home server. The following values were entered for the **Name** and **IP Address** fields for this configuration example: **ses** and **10.10.15.20** for the SIP Enablement Services Home server, **clan** and **10.10.15.15** for the C-LAN board, **medpro** and **10.10.15.16** for the IP Media Resource board.

| | | | | |
|----------------------|-------------|------|------|---|
| change node-names ip | | Page | 1 of | 2 |
| IP NODE NAMES | | | | |
| Name | IP Address | | | |
| clan | 10.10.15.15 | | | |
| default | 0.0.0.0 | | | |
| gateway | 10.10.15.1 | | | |
| medpro | 10.10.15.16 | | | |
| procr | 10.10.15.10 | | | |
| ses | 10.10.15.20 | | | |

2. Enter command **change ip-codec-set n**, where **n** is the IP codec set number used for the SIP connectivity to Avaya Voice Portal. For this sample configuration, IP codec set **1** is used. Enter **G.711 MU** as the Audio Codec to be supported.

| | | | | |
|-----------------------|-------------|---------|----------|---|
| change ip-codec-set 1 | | Page | 1 of | 2 |
| IP Codec Set | | | | |
| Codec Set: 1 | | | | |
| Audio | Silence | Frames | Packet | |
| Codec | Suppression | Per Pkt | Size(ms) | |
| 1: G.711MU | n | 2 | 20 | |

3. Enter command **change ip-network-region *n***, where *n* is the IP network region. **1** is used for this sample configuration (assume all servers residing on the same network region). Enter **du.rnd.avaya.com** for the **Authoritative Domain** field, **1** for the **Codec Set** field (refer to **Step 2**), and **yes** for the **Intra-region IP-IP Direct Audio** and **Inter-region IP-IP Direct Audio** fields. The IP-IP Direct Audio setting ensures the most efficient use of the media processor resources.

```
change ip-network-region 1                                     Page 1 of 19
                                     IP NETWORK REGION
Region: 1
Location: 1           Authoritative Domain: du.rnd.avaya.com
      Name: ImmediateVoice
MEDIA PARAMETERS           Intra-region IP-IP Direct Audio: yes
      Codec Set: 1         Inter-region IP-IP Direct Audio: yes
      UDP Port Min: 2048           IP Audio Hairpinning? n
      UDP Port Max: 3329
DIFFSERV/TOS PARAMETERS           RTCP Reporting Enabled? y
      Call Control PHB Value: 46   RTCP MONITOR SERVER PARAMETERS
      Audio PHB Value: 46           Use Default Server Parameters? y
      Video PHB Value: 26
802.1P/Q PARAMETERS
      Call Control 802.1p Priority: 6
      Audio 802.1p Priority: 6
      Video 802.1p Priority: 5     AUDIO RESOURCE RESERVATION PARAMETERS
H.323 IP ENDPOINTS           RSVP Enabled? n
      H.323 Link Bounce Recovery? y
      Idle Traffic Interval (sec): 20
      Keep-Alive Interval (sec): 5
      Keep-Alive Count: 5
```

4. Enter command **add signaling-group *n***, where *n* is an available signaling group number. Signaling group **1** is used for the sample configuration. Enter the following fields:
- **Group Type:** set to **sip**
 - **Transport Method:** set to **tls**
 - **Near-end Node Name:** set to **clan**
 - **Far-end Node Name:** set to **ses**
 - Set **Near-end Listen Port** and **Far-end Listen Port** to be **5061**
 - **Far-end Network Region:** set to **1**
 - **Far-end Domain:** set to **du.rnd.avaya.com**, match the **Authoritative Domain** entered in **Step 3**.
 - To support shuffling, set **Direct IP-IP Audio Connections** to be **y**.

```
add signaling-group 1                                     Page 1 of 1
                                     SIGNALING GROUP
Group Number: 1           Group Type: sip
                          Transport Method: tls
IMS Enabled? n
      Near-end Node Name: clan           Far-end Node Name: ses
      Near-end Listen Port: 5061         Far-end Listen Port: 5061
                                          Far-end Network Region: 1
Far-end Domain: du.rnd.avaya.com
                                          Bypass If IP Threshold Exceeded? n
      DTMF over IP: rtp-payload         Direct IP-IP Audio Connections? y
Session Establishment Timer(min): 3           IP Audio Hairpinning? y
      Enable Layer 3 Test? n           Direct IP-IP Early Media? n
H.323 Station Outgoing Direct Media? n       Alternate Route Timer(sec): 6
```

5. Enter command **add trunk-group *n***, where *n* is an available trunk group number. Trunk group **1** is used for the sample configuration. Enter the following fields:
- **Group Type:** set to **sip**
 - **Group Name:** set to a descriptive name
 - **TAC:** set to an available trunk access code
 - **Service Type:** set to **tie**
 - **Signaling Group:** set to **1**
 - **Number of Members:** set to **48** for this sample configuration.

| | | | |
|-----------------------|---------------------|----------------|----------|
| add trunk-group 1 | | Page 1 of 21 | |
| TRUNK GROUP | | | |
| Group Number: 1 | Group Type: sip | CDR Reports: y | |
| Group Name: to SES | COR: 1 | TN: 1 | TAC: 100 |
| Direction: two-way | Outgoing Display? n | Night Service: | |
| Dial Access? n | | | |
| Queue Length: 0 | | | |
| Service Type: tie | Auth Code? n | | |
| Signaling Group: 1 | | | |
| Number of Members: 48 | | | |

On Page 3, verify **Numbering Format** is set to **public**.

| | | | |
|--------------------------------|----------------|---------------------------------|--|
| add trunk-group 1 | | Page 3 of 21 | |
| TRUNK FEATURES | | | |
| ACA Assignment? n | Measured: none | Maintenance Tests? y | |
| | | | |
| Numbering Format: public | | UII Treatment: service-provider | |
| | | Replace Restricted Numbers? n | |
| | | Replace Unavailable Numbers? n | |
| Show ANSWERED BY on Display? y | | | |

4.3. Configure Call Routing to the Avaya Voice Portal System

This section describes the administration on Communication Manager that need be performed to set up call routing to the Avaya Voice Portal system.

1. Enter command **change route-pattern *n***, where *n* is an available route pattern number. Route pattern **1** is used for the sample configuration. For the **Pattern Name** field, enter a descriptive name for the route pattern. Enter the trunk number assigned in **Section 4.2 Step 5** for the **Grp No** field, and assign an appropriate Facility Restriction Level (**0** is the least restrictive) for the **FRL** field.

| | | | | | | | | | | | | | | | |
|------------------------|--|-------|-----|-----|--------|------|---------|----------|------|-----------------|--|-------------------------|------|-----------|-----|
| change route-pattern 1 | | | | | | | | | | | | Page | | 1 of 3 | |
| Pattern Number: 1 | | | | | | | | | | | | Pattern Name: TO VP-SIP | | | |
| SCCAN? n | | | | | | | | | | | | Secure SIP? n | | | |
| Grp | | FRL | NPA | Pfx | Hop | Toll | No. | Inserted | | | | | DCS/ | IXC | |
| No | | | | Mrk | Lmt | List | Del | Digits | | | | | QSIG | | |
| | | | | | | | | | | | | Dgts | | | |
| | | | | | | | | | | | | Intw | | | |
| 1: | | 1 | 0 | | | | | | | | | n | user | | |
| 2: | | | | | | | | | | | | n | user | | |
| 3: | | | | | | | | | | | | n | user | | |
| 4: | | | | | | | | | | | | n | user | | |
| 5: | | | | | | | | | | | | n | user | | |
| 6: | | | | | | | | | | | | n | user | | |
| | | | | | | | | | | | | | | | |
| BCC | | VALUE | | TSC | CA-TSC | | ITC | | BCIE | Service/Feature | | PARM | No. | Numbering | LAR |
| 0 | | 1 | 2 | M | 4 | W | Request | | | | | | Dgts | Format | |
| | | | | | | | | | | | | Subaddress | | | |
| 1: | | y | y | y | y | y | n | n | rest | | | | none | | |
| 2: | | y | y | y | y | y | n | n | rest | | | | none | | |
| 3: | | y | y | y | y | y | n | n | rest | | | | none | | |
| 4: | | y | y | y | y | y | n | n | rest | | | | none | | |
| 5: | | y | y | y | y | y | n | n | rest | | | | none | | |
| 6: | | y | y | y | y | y | n | n | rest | | | | none | | |

3. Enter command **change aar analysis *n***, where ***n*** matches the same leading digits used in **Step 2** above. The aar digit analysis table matches the leading digits dialed (as per the Uniform Dial Plan) to the desired route pattern. To add a new entry to the table, enter the following fields:

- **Dialed String:** is set to **222** (Leading digits dialed)
- **Total Min:** is set to **4** (Minimum number of digits expected)
- **Total Max:** is set to **4** (Maximum number of digits expected)
- **Route Pattern:** is set to **1** (Refer to **Step 1**)
- **Call Type:** is set to **aar** (Automatic Alternate Routing)

| | | | | | | | | |
|--------------------------|--|---------------|--|---------------|-----------|-----------------|-------------|--|
| change aar analysis 2 | | | | | | | Page 1 of 2 | |
| AAR DIGIT ANALYSIS TABLE | | | | | | | | |
| Location: all | | | | | | Percent Full: 1 | | |
| Dialed String | | Total Min Max | | Route Pattern | Call Type | Node Num | ANI Req'd | |
| 222 | | 4 4 | | 1 | aar | | n | |

5. Configure Avaya Voice Portal

This section details the administration on Avaya Voice Portal that must be performed to setup SIP connectivity to Communication Manager using SIP Enablement Services. For additional information on how to configure Avaya Voice Portal with web-based application services to provide voice and speech response self-service applications, please consult references [2] and [3] of these Application Notes.

5.1. Verify Avaya Voice Portal Licenses

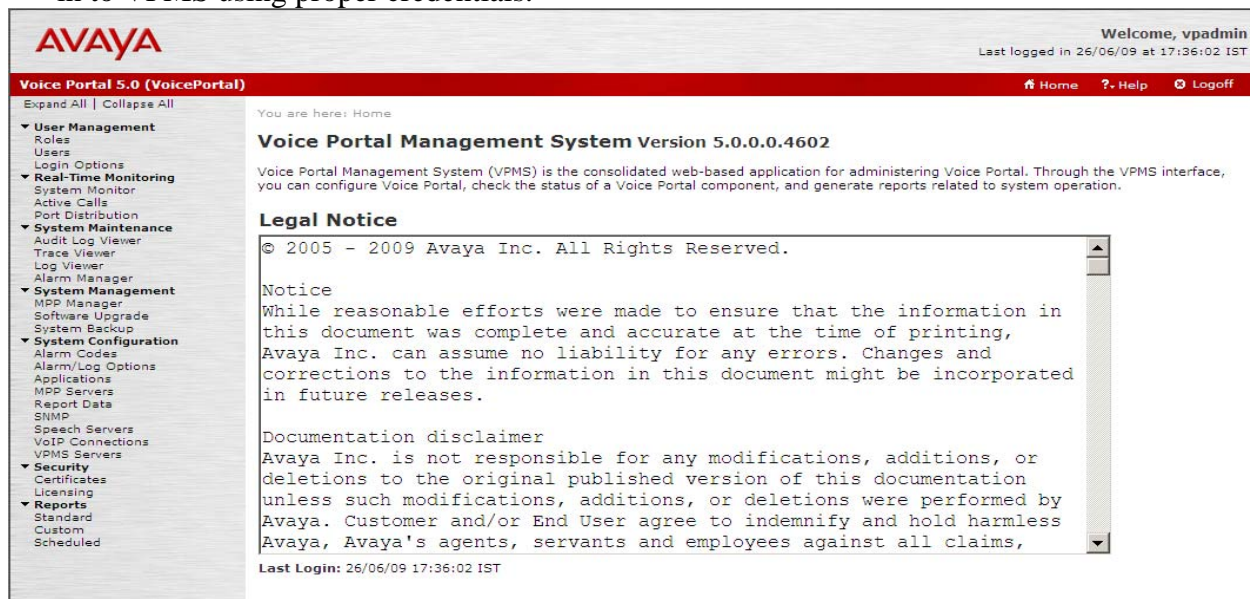
Avaya Voice Portal utilizes primary and secondary WebLM servers for implementation of feature licenses. If activation of additional features or ports is required, an updated license file must be obtained and installed on the WebLM server. The license file contains details about the features and number of ports purchased. To obtain an updated license file, please contact the Avaya Authorized Sales representative.

To Configure TLS as the proxy transport for SIP signaling between Avaya Voice Portal, SIP Enablement Services and Communication Manager, a security certificate must be installed on Avaya Voice Portal and a complementary trusted certificate on the SIP Enablement Services Home server.

Note: For simplicity reasons, in this sample application, TCP is used as the proxy transport for SIP signaling between Avaya Voice Portal and SIP Enablement Services. Thus the security certificates do not need to be installed (on Avaya Voice Portal and a complementary trusted certificate on the Avaya SES Home/Edge server). For more information about security on Avaya Voice Portal, please consult reference [6] in **Section 11** of these Application Notes.

The following section illustrates how to verify the licenses.

1. Access the VPMS web interface by typing the following URL on a web browser and then pressing <enter>: “<http://<hostname or IP address of VPMS server>/VoicePortal>” Log in to VPMS using proper credentials.



2. In the left pane of the VPMS window that appears, click on **Expand All** to show all options available under each section. Click on **Security** → **Licensing**.

AVAYA Welcome, vpadmin
Last logged in 26/06/09 at 17:36:02 IST

Voice Portal 5.0 (VoicePortal) Home ? Help Logoff

Expand All | Collapse All

You are here: [Home](#) > Security > Licensing

Licensing

This page displays the Voice Portal license information that is currently in effect. Voice Portal uses Avaya License Manager (WebLM) to control the number of telephony ports that are used.

License Information

| | |
|---------------------------|--|
| License Server URL: | https://10.10.15.50:8443/WebLM/LicenseServer |
| Telephony Ports: | 100 |
| Non Media Ports: | 0 |
| Announcement Ports: | 0 |
| ASR Connections: | 100 |
| TTS Connections: | 100 |
| Video Server Connections: | 100 |
| Version: | 5 |
| Last Changed: | 27/04/09 10:47:40 IST |
| Last Successful Poll: | 29/06/09 11:14:58 IST |

License Settings

License Server URL: **Verify**

| | Minimum | Maximum |
|---------------------|--------------------------------|------------------------------------|
| Telephony Ports: | <input type="text" value="0"/> | <input type="text" value="5,000"/> |
| Non Media Ports: | <input type="text" value="0"/> | <input type="text" value="0"/> |
| Announcement Ports: | <input type="text" value="0"/> | <input type="text" value="0"/> |

Apply **Cancel** **Help**

5.2. Configure a SIP Connection

The following section illustrates how to configure a SIP connection on the Avaya Voice Portal.

1. Click on **System Configuration** → **VoIP Connections**. Click on the **SIP** tab to continue.

AVAYA Welcome, vpadmin
Last logged in 26/06/09 at 17:36:02 IST

Voice Portal 5.0 (VoicePortal) Home ? Help Logoff

Expand All | Collapse All

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

VoIP Connections

This page displays a list of Voice over Internet Protocol (VoIP) servers that Voice Portal communicates with. You can configure multiple SIP connections, but only one SIP connection can be enabled at any one given time.

H.323 SIP

| <input type="checkbox"/> | Name | Enable | Proxy Transport | Proxy Server Address | Proxy Server Port | Listener Port | SIP Domain | Maximum Simultaneous Calls | Inbound Calls Allowed | Outbound Calls Allowed |
|--------------------------|---------|--------|-----------------|----------------------|-------------------|---------------|------------------|----------------------------|-----------------------|------------------------|
| <input type="checkbox"/> | SES-SRV | Yes | TCP | 10.10.15.20 | 5060 | 5060 | du.rnd.avaya.com | 10 | 10 | 10 |

Add **Delete** **Help**

2. Click on the **Add** button to add a SIP connection. Enter the following fields to add a new SIP connection:

- **Name** : set to **ses-srv** (A unique identifier for the SIP connection)
- **Proxy Transport** : set to **TCP** (use unencrypted connections for simplicity)
- **Proxy Server Address** : set to **10.10.15.20** (Full qualified domain name or an IP address of SIP Enablement Services)

Note: The **Proxy Server Port** default for TCP is 5060, and the field changes accordingly when the proxy transport is selected.

The screenshot displays the Avaya Voice Portal 5.0 (VoicePortal) interface. The top header includes the Avaya logo, a welcome message for 'vpadmin', and the last login time '26/06/09 at 17:36:02 IST'. The main navigation bar shows 'Voice Portal 5.0 (VoicePortal)' and links for 'Home', 'Help', and 'Logoff'. A left sidebar contains a tree view of system management options, with 'VoIP Connections' highlighted. The main content area shows the breadcrumb 'You are here: Home > System Configuration > VoIP Connections > Add SIP Connection' and the title 'Add SIP Connection'. Below the title, a message states 'Use this page to add a new SIP connection.' The form contains four fields: 'Name' (text input with 'ses-srv'), 'Proxy Transport' (dropdown menu with 'TCP' selected), 'Proxy Server Address' (text input with '10.10.15.20'), and 'Proxy Server Port' (text input with '5060'). To the right of the 'Proxy Server Address' field is a dark button labeled 'Administration'. At the bottom of the form are three buttons: 'Continue', 'Cancel', and 'Help'.

3. Click on the **Continue** button to continue the SIP Connection configuration. Enter the following fields:

- **SIP Domain** : set to **du.rnd.avaya.com** (must match the domain configured on **Section 4.2 Step 3 and Step 4**)
- **Maximum Simultaneous Calls** : set to **10** (The maximum number of calls that this SIP trunk can handle at one time)

Click on the **Save** button.

AVAYA Welcome, vpadmin
Last logged in 26/06/09 at 17:36:02 IST

Voice Portal 5.0 (VoicePortal) Home ? Help Logoff

Expand All | Collapse All

▼ 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
MPP Manager
Software Upgrade
System Backup

▼ System Configuration
Alarm Codes
Alarm/Log Options
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](#) > [VoIP Connections](#) > Add SIP Connection

Add SIP Connection

Use this page to add a new SIP connection.

Name: ses-srv
Enable: ☒ Yes ☐ No
Proxy Transport: TCP

Proxy Servers

| Address | Port | Administration |
|-------------|------|------------------------------|
| 10.10.15.20 | 5060 | Administration Remove |

[Additional Proxy Server](#)

Listener Port: 5060
SIP Domain: du.rnd.avaya.com
P-Asserted-Identity:

Call Capacity

Maximum Simultaneous Calls: 10
☒ All Calls can be either inbound or outbound
☐ Configure number of inbound and outbound calls allowed

Save Cancel Help

4. The screen below illustrates that the SIP connection has been successfully configured and saved.

The screenshot shows the Avaya Voice Portal 5.0 (VoicePortal) interface. The top navigation bar includes the Avaya logo, a welcome message for 'vpadmin', and the last login time '26/06/09 at 17:36:02 IST'. The main navigation menu on the left lists various system management and monitoring options. The current page is 'VoIP Connections', which displays a table of configured SIP connections. A message indicates that the entered information has been saved.

VoIP Connections

This page displays a list of Voice over Internet Protocol (VoIP) servers that Voice Portal communicates with. You can configure multiple SIP connections, but only one SIP connection can be enabled at any one given time.

• The information that you entered has been saved.

| | Name | Enable | Proxy Transport | Proxy Server Address | Proxy Server Port | Listener Port | SIP Domain | Maximum Simultaneous Calls | Inbound Calls Allowed | Outbound Calls Allowed |
|--------------------------|---------|--------|-----------------|----------------------|-------------------|---------------|------------------|----------------------------|-----------------------|------------------------|
| <input type="checkbox"/> | SBS-srv | Yes | TCP | 10.10.15.20 | 5060 | 5060 | du.rnd.avaya.com | 10 | 10 | 10 |

Add Delete Help

5.3. Configure an Application for ImmediateVoice

The following section illustrates how to configure a test VXML application to verify the SIP connection on Avaya VPMS. Please consult reference [2] in **Section 11** to perform the following configuration tasks prior to configuring the test application:

- Adding the MPP server(s)
- Adding an ARS server
- Adding a TTS server

1. Click on **System Configuration → Applications**. Click the **Add** button to configure a new application.

The screenshot shows the Avaya Voice Portal 5.0 (VoicePortal) web interface. The top navigation bar includes the Avaya logo, a welcome message for 'vpadmin', and a timestamp 'Last logged in 26/06/09 at 17:36:02 IST'. Below this is a red header bar with 'Voice Portal 5.0 (VoicePortal)' and navigation links for Home, Help, and Logoff. A left sidebar contains a tree view of system management options, with 'Applications' highlighted under 'System Configuration'. The main content area, titled 'Applications', contains a descriptive paragraph and a table of deployed applications.

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 | MIME Type | URL | Launch | ASR | Languages | TTS | Vo |
|--------------------------|--------------------------------|--------|-----------|--|------------|--------|--|----------|--|
| <input type="checkbox"/> | Test1 | Yes | VoiceXML | http://10.10.15.51/mpp/misc/avptestapp/intro.vxml | 5007, 2226 | Nuance | English(USA) en-us | Nuance | English en-US Jennifer |
| <input type="checkbox"/> | ImmediateVoice | Yes | CCXML | http://10.10.15.90:3188/ImmediateVoice/iv.ccxml.jsp | 9995 | Nuance | Dutch (Netherlands) nl-nl, English(UK) en-gb | Nuance F | Dutch (Netherlands) nl-nl, English en-GB M |
| <input type="checkbox"/> | ivSurvey_start | Yes | VoiceXML | http://10.10.15.90:3184/nextidm/vt/100001/ivsSurvey/vrs/nl-NL/vxml/uwv-start.xml | Outbound | No ASR | | No TTS | |
| <input type="checkbox"/> | ivSurvey | Yes | CCXML | http://10.10.15.90:3184/nextidm/vt/100001/ivsSurvey/vrs/nl-NL/vxml/ccxml-uwv-2.xml | 8887 | Nuance | Dutch (Netherlands) nl-nl | Nuance | Dutch (Netherlands) nl-nl |

Buttons: **Add** **Delete** **Help**

2. Enter the following fields to add a new application:

- **Name:** set to **ImmediateVoice** (A descriptive name for the test VXML (CCXML) application)
- **Enable:** select the **Yes**
- **MIME Type:** select **VoiceXML** according to the application type
- **VoiceXML URL:** enter the necessary URL(s) to access the VXML application on the application server.
- **Speech Servers ASR and TTS:** add the ASR and TTS servers as shown below (if available)
- **Application Launch Type:** select **Inbound**
- Select the **Number** radio button
- **Called Number:** enter an extension **2225** for the test application, click on the **Add** button. SIP Enablement Services will have a corresponding Application ID to route this extension (refer to **Step 4 in Section 6.2**) to Avaya Voice Portal.

Click on the **Save** button to commit the configuration.

AVAYA Welcome, vpadmin
Last logged in 26/06/09 at 17:36:02 IST

Voice Portal 5.0 (VoicePortal) Home ? Help Logoff

Expand All | Collapse All

- ▼ **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**
 - MPP Manager
 - Software Upgrade
 - System Backup
- ▼ **System Configuration**
 - Alarm Codes
 - Alarm/Log Options
 - 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](#) > Add Application

Add Application

Use this page to deploy and configure a new VoiceXML or CCXML application on the Voice Portal system.

Name:

Enable: ☒ Yes ☐ No

MIME Type:

VoiceXML URL: **Verify**

Speech Servers

ASR: TTS:

Languages:

Voices:

Application Launch

Type: ☒ Inbound ☐ Inbound Default ☐ Outbound

☒ Number ☐ Number Range ☐ URI

Called Number: **Add**

Remove

Speech Parameters ▶

Reporting Parameters ▶

Advanced Parameters ▶

Save **Cancel** **Help**

6. Configure SIP Enablement Services

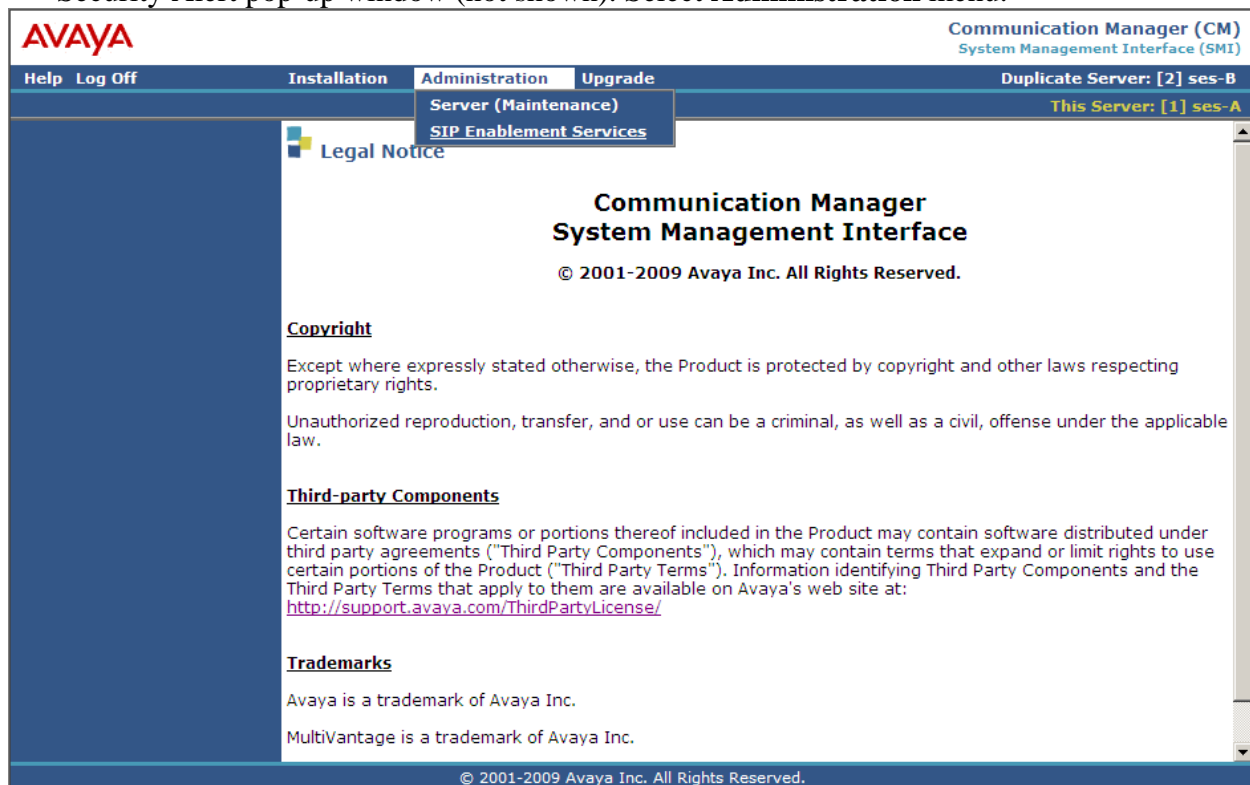
This section only details the configuration required on SIP Enablement Services to set up SIP connectivity to Communication Manager and Avaya Voice Portal and assumes the Avaya SES service is already in place. For additional administration information on Avaya SES, please consult reference [7].

6.1. Configuring Media Server Interface

1. Access SIP Enablement Services web interface by typing the following URL on a web browser and then pressing enter:

http://<hostname or IP address of SIP Enablement Services>/admin

Press the Continue button on the Welcome web page and then press the **Yes** button in the Security Alert pop-up window (not shown). Select **Administration** menu.



2. Click the **SIP Enablement Services** from Administration Menu. The screen will be shown as below:

AVAYA Integrated Management SIP Server Management
Help Exit Primary Server: [1] ses-A Duplicate Server: [2] ses-B

Top

| | |
|--|--|
| Manage Users | Add and delete Users. |
| Manage Address Map Priorities | Adjust Address Map Priorities. |
| Manage Adjunct Systems | Add and delete Adjunct Systems. |
| Manage Event Aggregators | Add/Delete Event Aggregators. |
| Certificate Management | Manage Certificates. |
| Manage Conferencing | Add and delete Conference Extensions. |
| Manage Emergency Contacts | Add and delete Emergency Contacts. |
| Export Import to ProVision | Export and import data using ProVision on this host. |
| Manage Hosts | Add and delete Hosts. |
| IM logs | Download IM Logs. |
| Manage Communication Manager Servers | Add and delete Communication Manager Servers. |
| Manage Communication Manager Extensions | Add and delete Communication Manager Extensions. |
| Server Configuration | View Properties of the system. |
| Manage SIP Phone Settings | Add/Delete Phone Settings |
| Manage Survivable Call Processors | Add and delete Survivable Call Processors. |
| System Status | View System Status. |
| Trace Logger | Manage SIP Trace Logs. |
| Manage Trusted Hosts | Add and delete Trusted Hosts. |

3. Click on **Communication Manager Servers** → **Add** to add the Communication Manager Server Interface. Enter the following:
 - **Communication Manager Server Interface Name** : set to **CMIV**
 - **Host**: set to **10.10.15.20**
 - **SIP Trunk Link Type**: set to **TLS** (refer to **Transport Method** in **Step 4** in **Section 4.2**)
 - **SIP Trunk IP Address**: set to **10.10.15.15** (refer to **clan IP** in **Step 1** in **Section 4.2**)
 - **Communication Manager Server Admin Address**: set to **10.10.15.10** (IP address of Communication Manager)
 - **Communication Manager Server Admin Login**: set to be Communication Manager administration account with SAT access)
 - **Communication Manager Server Admin Password**: *<password>*
 - **Communication Manager Server Admin Password Confirm**: *<password>*
- Click the **Add** button to save the changes on SIP Enablement Services.

The screenshot shows the Avaya Integrated Management SIP Server Management interface. The top header includes the Avaya logo, the title 'Integrated Management SIP Server Management', and server status: 'Primary Server: [1] ses-A Duplicate Server: [2] ses-B'. A left sidebar contains a navigation menu with options like 'Top', 'Setup', 'Users', 'Address Map Priorities', 'Adjunct Systems', 'Aggregator', 'Certificate Management', 'Conferences', 'Emergency Contacts', 'Export/Import to ProVision', 'Hosts', 'IM logs', 'Communication Manager Servers' (selected), 'Add', 'List', 'Communication Manager Extensions', 'Server Configuration', 'SIP Phone Settings', 'Survivable Call Processors', 'System Status', 'Trace Logger', and 'Trusted Hosts'. The main content area is titled 'Add Communication Manager Server Interface' and contains the following fields and options:

- Communication Manager Server Interface Name***: CMIV
- Host**: 10.10.15.20
- SIP Trunk** section:
 - SIP Trunk Link Type**: ☐ TCP ☒ TLS
 - SIP Trunk IP Address***: 10.10.15.15
- Communication Manager Server** section:
 - Communication Manager Server Admin Address*** (see Help): 10.10.15.10
 - Communication Manager Server Admin Port***: 5022
 - Communication Manager Server Admin Login***: init
 - Communication Manager Server Admin Password***: [masked]
 - Communication Manager Server Admin Password Confirm***: [masked]
- SMS Connection Type**: ☒ SSH ☐ Telnet ☐ Not Available

A note at the bottom states: 'Note: If the Communication Manager Server connection type is changed and the admin port value is not also changed, changing connection type to SSH will change the admin port to 5022 when Add or Update is clicked and changing connection type to Telnet will change admin port to 5023 when Add or Update is clicked.' Below the note, it says 'Fields marked * are required.' and there is an 'Add' button.

4. Click on **Communication Manager Servers** → **List** to list the configured Communication Manager Server Interface.

The screenshot shows the Avaya Integrated Management SIP Server Management interface. The left sidebar contains a navigation menu with the following items: Top, Setup, Users, Address Map, Priorities, Adjunct Systems, Add, List, Aggregator, Certificate Management, Conferences, Emergency Contacts, Export/Import to ProVision, Hosts, IM logs, Communication Manager Servers, Add, List, and Communication. The main content area is titled 'List Communication Manager Servers' and displays a table with the following data:

| Commands | | | | | Interface | Host |
|----------|------------|-----|-----------|--------|-----------|-------------|
| Edit | Extensions | Map | Test-Link | Delete | CMIV | 10.10.15.20 |
| Edit | Extensions | Map | Test-Link | Delete | CMipc | 10.10.15.20 |

Below the table, there is a link: [Add Another Communication Manager Server Interface](#).

5. Click on **Map** button of the Communication Manager Server configured, **List Communication Manager Server Address Map** window is displayed. Click on **Add Map in New Group**.

The screenshot shows the Avaya Integrated Management SIP Server Management interface. The left sidebar contains a navigation menu with the following items: Top, Setup, Users, Address Map, Priorities, Adjunct Systems, Aggregator, Certificate Management, Conferences, Emergency Contacts, Export/Import to ProVision, Hosts, IM logs, Communication Manager Servers, Add, List, Communication Manager Extensions, Server Configuration, and SIP Phone Settings. The main content area is titled 'List Communication Manager Server Address Map' and displays the message: 'No address map entries.' Below this message, there is a link: [Add Map In New Group](#).

6. Add **Name** field and **Pattern** field in the **Add Communication Manager Server Address Map**. **Pattern** must match Avaya extensions (in this sample configuration, 71xx are used as Avaya extensions), otherwise outbound call will not be routed through SIP. Click **Add** button and **Continue** button (which is not shown).

AVAYA Integrated Management SIP Server Management

Primary Server: [1] ses-A Duplicate Server: [2] ses-B

Help Exit

Top

- Setup
- Users
- Address Map
- Priorities
- Adjunct Systems
- Aggregator
- Certificate Management
- Conferences
- Emergency Contacts
- Export/Import to ProVision
- Hosts
- IM logs
- Communication Manager Servers
 - Add
 - List
- Communication Manager Extensions
- Server Configuration
- SIP Phone Settings

Add Communication Manager Server Address Map

Name*

Pattern*

Fields marked * are required.

Add

7. The Communication Manager Server Address Map will be displayed as below.

AVAYA Integrated Management SIP Server Management

Primary Server: [1] ses-A Duplicate Server: [2] ses-B

Help Exit

Top

- Setup
- Users
- Address Map
- Priorities
- Adjunct Systems
- Aggregator
- Certificate Management
- Conferences
- Emergency Contacts
- Export/Import to ProVision
- Hosts
- IM logs
- Communication Manager Servers
 - Add
 - List
- Communication Manager Extensions
- Server Configuration
- SIP Phone Settings

List Communication Manager Server Address Map

| Commands | Name | Commands | Contact |
|----------------------|------|---------------------|---|
| Edit Delete | 71xx | Edit Delete | sip:\$(user) @10.10.15.15:5061;transport=tls |
| Add Another Map | | Add Another Contact | |
| Add Map In New Group | | Delete Group | |

6.2. Configuring Avaya Voice Portal as an Adjunct System

1. Click on **Adjunct Systems**→**Add** to add the Avaya VPMS as an adjunct system. Enter **avayavoiceportal50** for the VPMS name in the **System Name** field. For the **Host** field, select **10.10.15.20** which is the Avaya SES Home server IP address with which the VPMS will be integrated. Click the **Add** button to submit the change. Click on the **Continue** button (not shown) to continue.

The screenshot shows the Avaya Integrated Management SIP Server Management web interface. The top header includes the Avaya logo, 'Integrated Management SIP Server Management', and server status: 'Primary Server: [1] ses-A Duplicate Server: [2] ses-B'. A left sidebar contains a navigation menu with categories like 'Top', 'Setup', 'Users', 'Address Map', 'Priorities', 'Adjunct Systems', 'Add', 'List', 'Aggregator', 'Certificate Management', 'Conferences', 'Emergency', 'Contacts', 'Export/Import to ProVision', 'Hosts', 'IM logs', 'Communication Manager Servers', 'Communication Manager Extensions', 'Server Configuration', 'SIP Phone Settings', 'Survivable Call Processors', 'System Status', 'Trace Logger', and 'Trusted Hosts'. The main content area is titled 'Add Adjunct System' and contains the following form fields: 'System Name*' with the value 'avayavoiceportal50', 'Host' with a dropdown menu showing '10.10.15.20', and 'Replace URI' with an unchecked checkbox. A note below the fields states 'Fields marked * are required.' and an 'Add' button is at the bottom of the form. The footer of the page reads '© 2006 Avaya Inc. All Rights Reserved.'

2. Click on the **Adjunct Systems**→**List**→**List Application IDs (1)** link for the adjunct system added (**avayavoiceportal50**) in **Step 1** above.

Integrated Management
SIP Server Management

Help Exit
Primary Server: [1] ses-A Duplicate Server: [2] ses-B

Top
Setup
Users
Address Map
Priorities
Adjunct Systems
Add
List
Aggregator
Certificate
Management
Conferences
Emergency
Contacts
Export/Import to
ProVision
Hosts
IM logs
Communication
Manager Servers
Communication
Manager Extensions
Server
Configuration
SIP Phone Settings

List Adjunct Systems

| Commands | | | | System | Host |
|----------|--------|-------------------------|-------------------------|--------------------|-------------|
| Edit | Delete | List Adjunct Servers(0) | List Application IDs(1) | avayavoiceportal50 | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(1) | List Application IDs(2) | silmm | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(0) | List Application IDs(1) | test | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(1) | List Application IDs(1) | voiceportal50 | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(1) | List Application IDs(2) | voiceportalsystem | 10.10.15.20 |

Add Another Adjunct System

3. Click on the **Add an Application ID** link.

Integrated Management
SIP Server Management

Help Exit
Primary Server: [1] ses-A Duplicate Server: [2] ses-B

Top
Setup
Users
Address Map
Priorities
Adjunct Systems
Add
List
Aggregator
Certificate
Management
Conferences
Emergency
Contacts
Export/Import to
ProVision
Hosts
IM logs
Communication
Manager Servers
Communication
Manager Extensions
Server
Configuration
SIP Phone Settings

List Application IDs for system avayavoiceportal50

| Commands | Application IDs |
|-------------|--------------------|
| Edit Delete | avayavoiceportal50 |

Add an Application ID

4. Enter the extension **2225** for the **Application ID** field (refer to **Step 2** in **Section 5.3**). Repeat **Step 3** and **Step 4** to add additional application IDs for each application extension on Avaya Voice Portal. Click the **Add** button to submit the change. Click on the **Continue** button (not shown) to continue.

AVAYA Integrated Management SIP Server Management
 Help Exit Primary Server: [1] ses-A Duplicate Server: [2] ses-B

Top
 Setup
 Users
 Address Map
 Priorities
 Adjunct Systems
 Add
 List
 Aggregator
 Certificate Management
 Conferences
 Emergency Contacts
 Export/Import to ProVision
 Hosts
 IM logs
 Communication Manager Servers
 Communication Manager Extensions
 Server Configuration
 SIP Phone Settings

Add Application ID for system avayavoiceportal50

Application ID*
 Host 10.10.15.20
 Fields marked * are required.

Add

5. Click on **Adjunct Systems**→**List**→**List Adjunct Servers (0)** link for the adjunct system added (**avayavoiceportal50**) in **Step 1**.

AVAYA Integrated Management SIP Server Management
 Help Exit Primary Server: [1] ses-A Duplicate Server: [2] ses-B

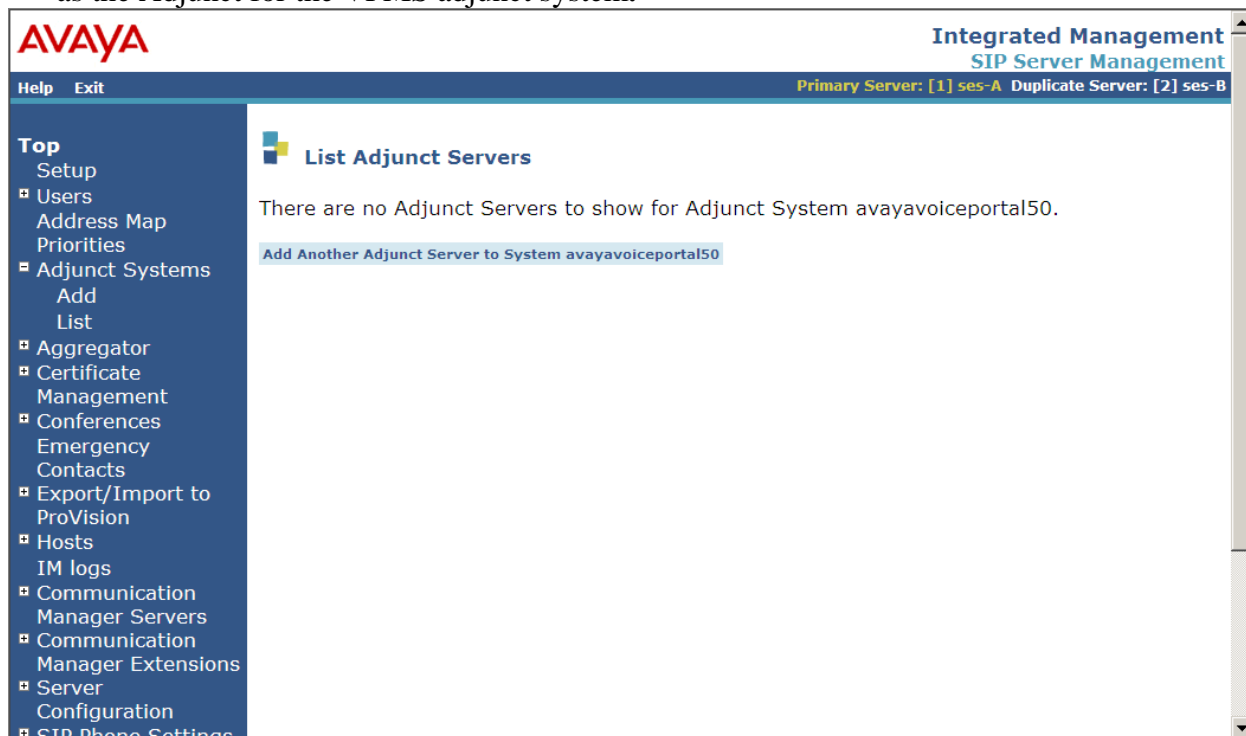
Top
 Setup
 Users
 Address Map
 Priorities
 Adjunct Systems
 Add
 List
 Aggregator
 Certificate Management
 Conferences
 Emergency Contacts
 Export/Import to ProVision
 Hosts
 IM logs
 Communication Manager Servers
 Communication Manager Extensions
 Server Configuration
 SIP Phone Settings

List Adjunct Systems

| Commands | | | | System | Host |
|----------|--------|--------------------------------|-------------------------|--------------------|-------------|
| Edit | Delete | List Adjunct Servers(0) | List Application IDs(2) | avayavoiceportal50 | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(1) | List Application IDs(2) | silmm | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(0) | List Application IDs(1) | test | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(1) | List Application IDs(1) | voiceportal50 | 10.10.15.20 |
| Edit | Delete | List Adjunct Servers(1) | List Application IDs(2) | voiceportalsystem | 10.10.15.20 |

Add Another Adjunct System

6. Click on **Add Another Adjunct Server to System avayavoiceportal50** link to add the MPP as the Adjunct for the VPMS adjunct system.

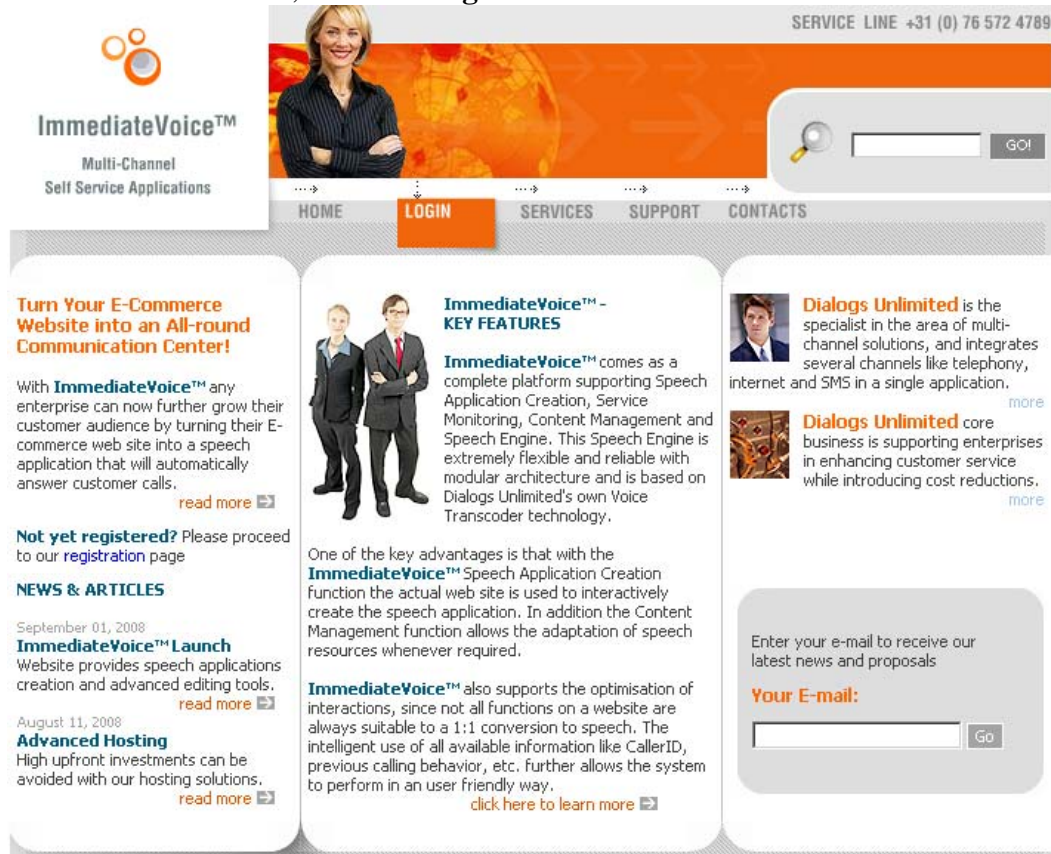


7. Enter **VP50** (a unique name for the MPP adjunct server) in the **Server Name** field. Enter the extension **2228** that Communication Manager will use to reach the MPP adjunct server for the **Server ID** field (SIP Enablement Services uses this extension to form the SIP URI for the adjunct system). The **Link Type** field is set to **TCP** in this sample configuration. Enter the MPP server IP address **10.10.15.51** for the **Server IP Address** field. Click the **Add** button to submit the change. Click on **Continue** button (not shown) to continue.

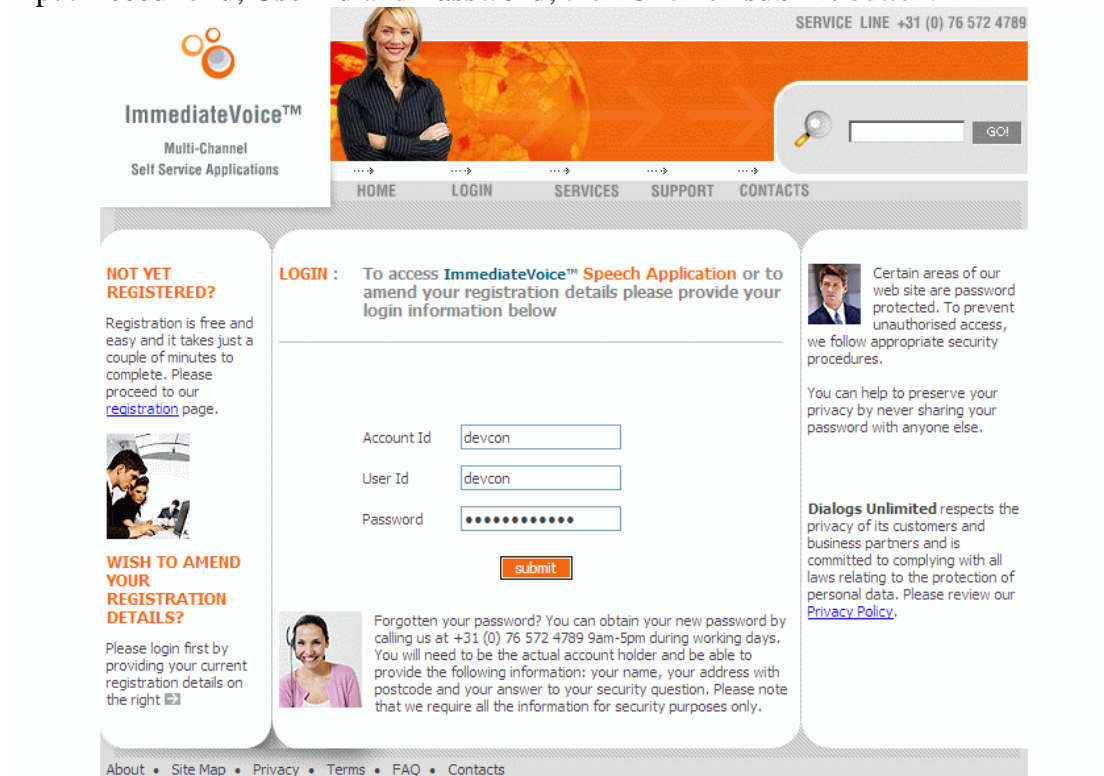


7. Configuring ImmediateVoice Speech Application Engine

1. Access the ImmediateVoice Application Server by typing the following URL on a web browser and then pressing enter: “http://<hostname or IP address of ImmediateVoice server>/ImmediateVoice”, Click on **Login**.



2. Input **Account Id**, **User Id** and **Password**, then Click on **submit** button.



ImmediateVoice™
Multi-Channel
Self Service Applications

SERVICE LINE +31 (0) 76 572 4789

HOME LOGIN SERVICES SUPPORT CONTACTS

NOT YET REGISTERED?
Registration is free and easy and it takes just a couple of minutes to complete. Please proceed to our [registration](#) page.

WISH TO AMEND YOUR REGISTRATION DETAILS?
Please login first by providing your current registration details on the right.

LOGIN : To access **ImmediateVoice™ Speech Application** or to amend your registration details please provide your login information below

Account Id

User Id

Password

submit

Forgotten your password? You can obtain your new password by calling us at +31 (0) 76 572 4789 9am-5pm during working days. You will need to be the actual account holder and be able to provide the following information: your name, your address with postcode and your answer to your security question. Please note that we require all the information for security purposes only.

Certain areas of our web site are password protected. To prevent unauthorised access, we follow appropriate security procedures.

You can help to preserve your privacy by never sharing your password with anyone else.

Dialogs Unlimited respects the privacy of its customers and business partners and is committed to complying with all laws relating to the protection of personal data. Please review our [Privacy Policy](#).

About • Site Map • Privacy • Terms • FAQ • Contacts

3. Select speech application for testing from the list of **Existing Speech Applications** on the right hand side of the screen and click on it to enter Application Editing page. In this sample application, speech application **Schiphol_GB** is used.

ImmediateVoice™
Multi-Channel
Self Service Applications

SERVICE LINE +31 (0) 76 572 4789

HOME LOGOUT SERVICES SUPPORT CONTACTS

WELCOME TO ImmediateVoice™

TO START USING APPLICATION
please follow instructions on the right

TO AMEND YOUR REGISTRATION DETAILS
please click [here](#)

TO OBTAIN ADVISE AND SUPPORT
please visit our [support](#) page where you can find useful advise and information with regard to ImmediateVoice usage

STEP 1 : To start a New Speech Application please provide application details below

To edit an Existing Speech Application please select from the list on the right

Start URL

Application Name

submit setup cancel

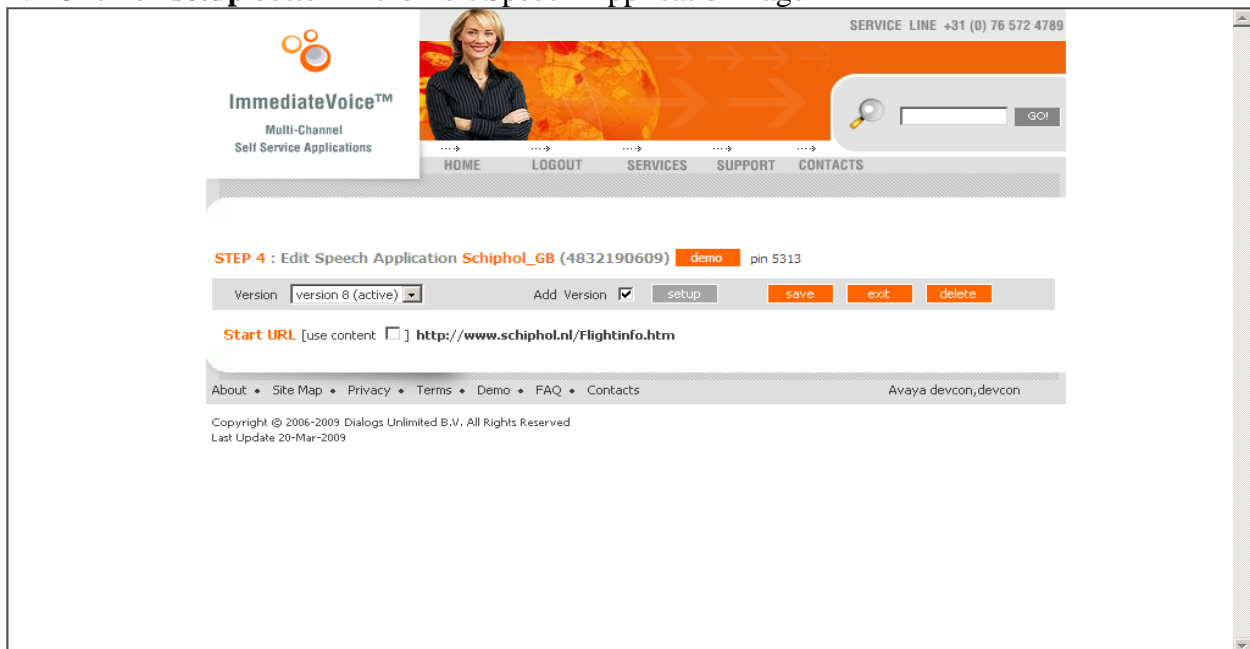
Existing Speech Applications

[POS Schiphol_GB](#)

About • Site Map • Privacy • Terms • Demo • FAQ • Contacts

Vladimir devcon,devcon

4. Click on **setup** button in the Edit Speech Application Page



ImmediateVoice™
Multi-Channel
Self Service Applications

SERVICE LINE +31 (0) 76 572 4789

HOME LOGOUT SERVICES SUPPORT CONTACTS

STEP 4 : Edit Speech Application **Schiphol_GB** (4832190609) demo pin 5313

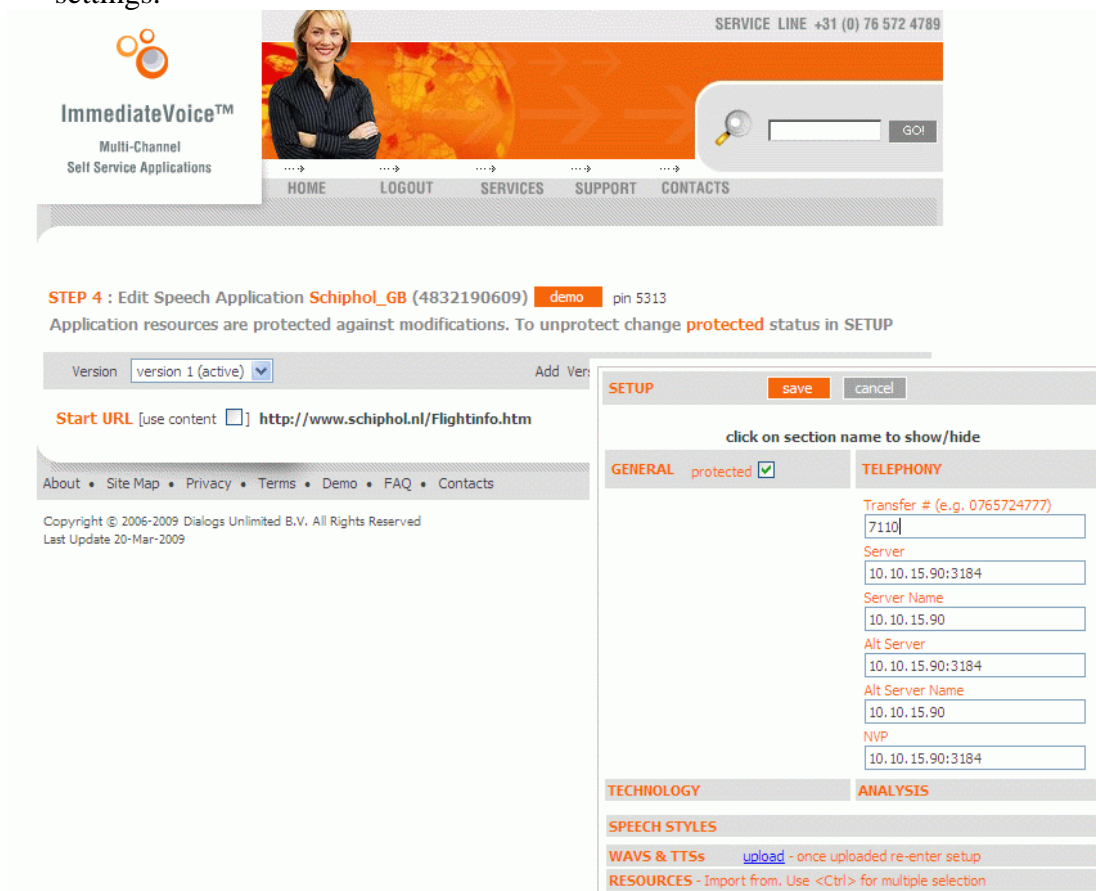
Version **version 8 (active)** Add Version ☒ **setup** **save** **exit** **delete**

Start URL [use content ☐http://www.schiphol.nl/Flightinfo.htm

About • Site Map • Privacy • Terms • Demo • FAQ • Contacts Avaya devcon,devcon

Copyright © 2006-2009 Dialogs Unlimited B.V. All Rights Reserved
Last Update 20-Mar-2009

5. Click on **TELEPHONY** tab; fill in **transfer #** and speech engine credentials (**Server**, **Server Name**). Use the same settings for Alt Server and NVP. Click **Save** button to save updated settings.



ImmediateVoice™
Multi-Channel
Self Service Applications

SERVICE LINE +31 (0) 76 572 4789

HOME LOGOUT SERVICES SUPPORT CONTACTS

STEP 4 : Edit Speech Application **Schiphol_GB** (4832190609) demo pin 5313

Application resources are protected against modifications. To unprotect change **protected** status in SETUP

Version **version 1 (active)** Add Ver...

Start URL [use content ☐http://www.schiphol.nl/Flightinfo.htm

About • Site Map • Privacy • Terms • Demo • FAQ • Contacts

Copyright © 2006-2009 Dialogs Unlimited B.V. All Rights Reserved
Last Update 20-Mar-2009

SETUP **save** **cancel**

click on section name to show/hide

GENERAL **protected** ☒ **TELEPHONY**

Transfer # (e.g. 0765724777)

Server

Server Name

Alt Server

Alt Server Name

NVP

TECHNOLOGY **ANALYSIS**

SPEECH STYLES

WAVS & TTSS **upload** - once uploaded re-enter setup

RESOURCES - Import from. Use <Ctrl> for multiple selection

8. General Test Approach and Test Results

The interoperability compliance test included feature and serviceability testing. The feature testing is performed following the ImmediateVoice call flow diagram shown below.

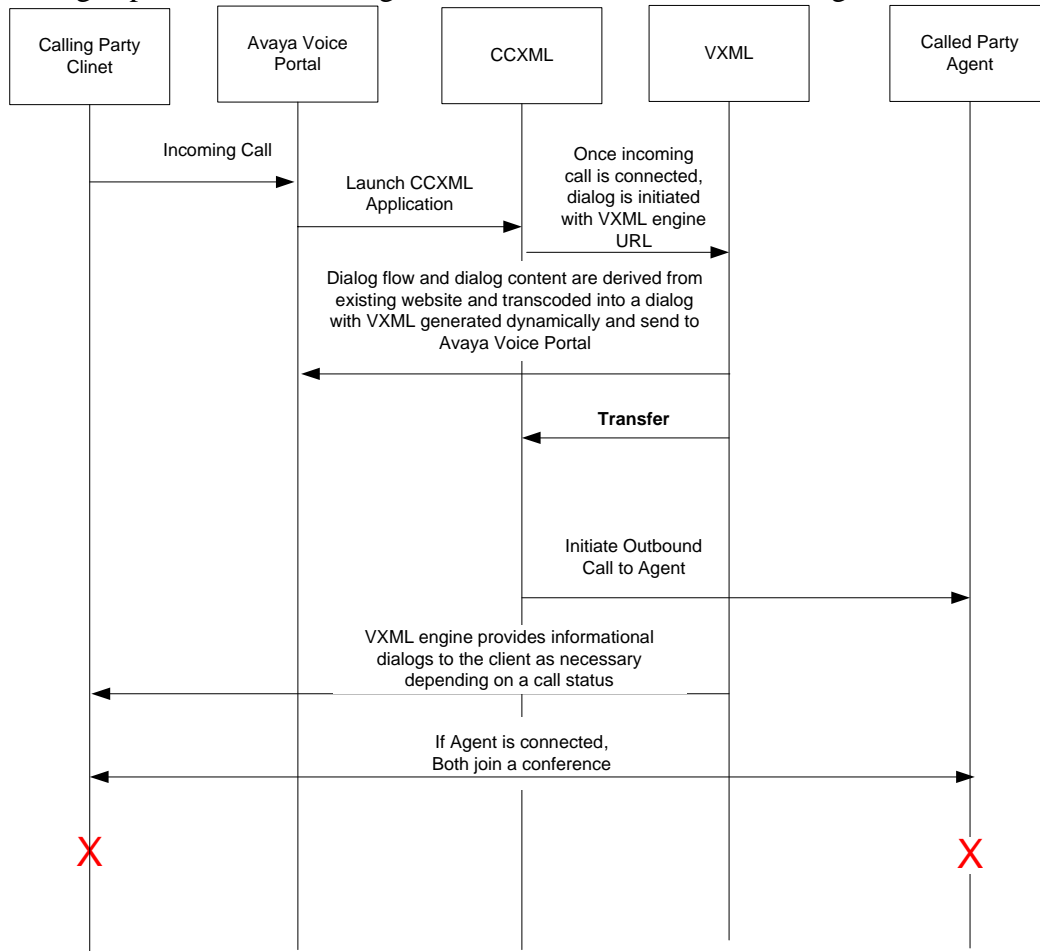


Figure 2: ImmediateVoice Call flow

The serviceability testing focused on verifying the solution's ability to recover from an outage condition, such as busying out the SIP trunk and disconnecting the cable for the ImmediateVoice Speech Application Engine or Avaya Voice Portal.

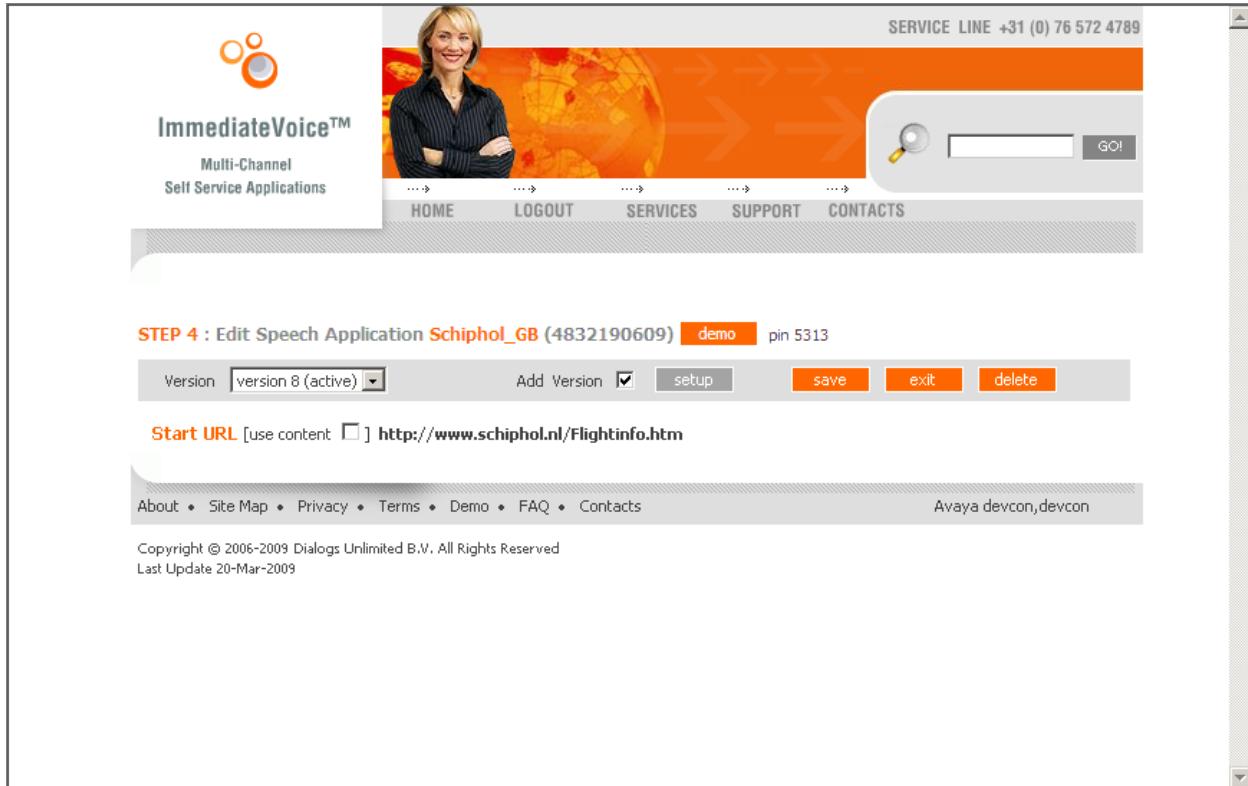
All feature and serviceability test cases were performed manually. Tests are performed by calling Avaya Voice Portal and monitoring inputs made into website form and browsing which conversation is in progress. The monitoring function is supported by ImmediateVoice speech application engine. Monitoring can be performed on a Windows PC over the web. No special software is required, just Internet Explorer browser version 6, 7 or 8.

All test cases were executed successfully and no observations were made.

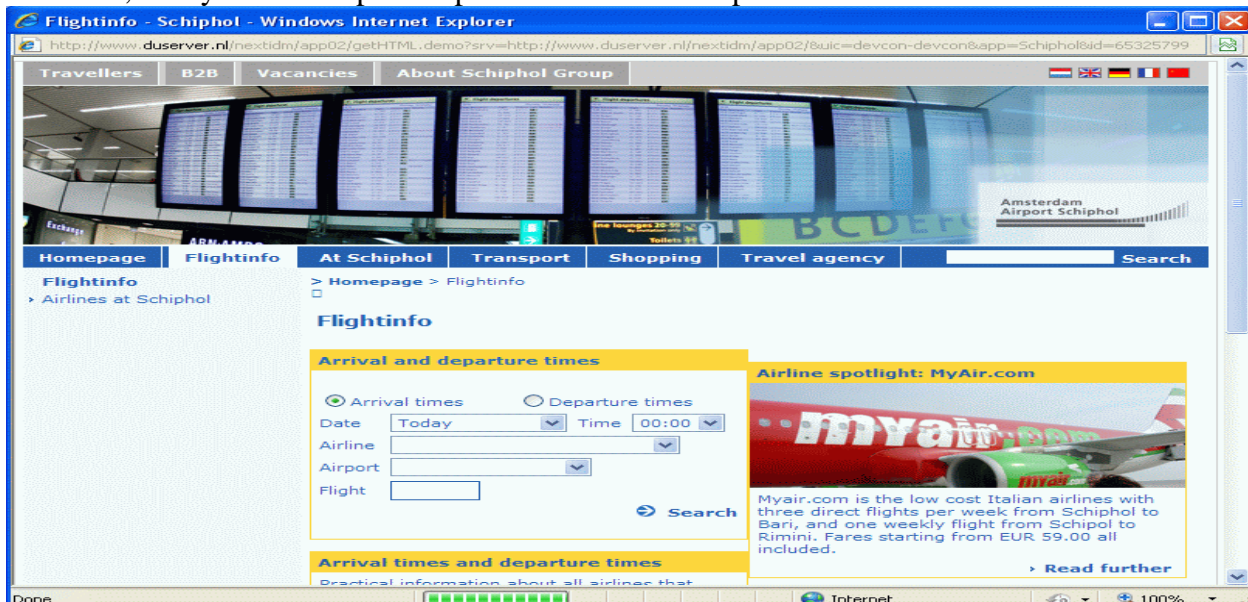
9. Verification Steps

The following steps may be used to verify the configuration:

1. Get demo pin in the Edit Speech Application Schiphol_GB webpage. Click on the demo button.



2. Place an inbound call to the Schiphol airport speech application, and input demo pin through voice, verify if the Schiphol airport website will be open.



3. Verify the call will be transferred to the number configured in **Section 7 Step 5** after providing wrong input a few times through voice.
4. Verify the transferred phone ringing for several times and disconnect properly.

10. Conclusion

These Application Notes describe the steps for configuring Avaya Voice Portal 5.0 with Dialogs Unlimited ImmediateVoice v2.0 and SIP Enablement Services based on SIP connectivity.

11. Additional References

Product documentation for Avaya products may be found at <http://support.avaya.com>.

[1] “*Administering Avaya Aura™ Communication Manager*”, Issue 5, May 2009; Doc ID: 03-300509

[2] “*Configuring Avaya Voice Portal with Avaya Communication Manager and Designing a Sample Speech Application using Avaya Dialog Designer*”, Issue 1.0, September 2006

[3] “*Administering Avaya Voice Portal*”, March 2009

[4] “*Configuration Note 3911 Avaya Voice Portal (Software application) – SIP Integration*”, December 2008

[5] “*Application Notes for Configuring SIP Connectivity between Avaya Voice Portal and Avaya Communication Manager using Avaya SIP Enablement Services*”, Issue 1.0, November 2007

[6] “*Avaya Voice Portal 5.0 Security White Paper*”, March 2009

[7] “*Installing, Administering, Maintaining, and Upgrading Avaya Aura™ SIP Enablement Services*”, Issue 7, May 2009; Doc ID 03-600768

©2009 Avaya Inc. All Rights Reserved.

Avaya and the Avaya Logo are trademarks of Avaya Inc. All trademarks identified by ® and ™ are registered trademarks or trademarks, respectively, of Avaya Inc. All other trademarks are the property of their respective owners. The information provided in these Application Notes is subject to change without notice. The configurations, technical data, and recommendations provided in these Application Notes are believed to be accurate and dependable, but are presented without express or implied warranty. Users are responsible for their application of any products specified in these Application Notes.

Please e-mail any questions or comments pertaining to these Application Notes along with the full title name and filename, located in the lower right corner, directly to the Avaya DevConnect Program at devconnect@avaya.com.