



Avaya Solution & Interoperability Test Lab

Application Notes for LumenVox Speech Suite 19.2 with Avaya Aura® Experience Portal 8.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for LumenVox Speech Suite 19.2 to interoperate with Avaya Aura® Experience Portal 8.0.

In the compliance testing, LumenVox Speech Suite provided Automatic Speech Recognizer, Text-to-Speech, and Call Progress Analysis capabilities for Experience Portal applications.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

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

1. Introduction

These Application Notes describe the configuration steps required for LumenVox Speech Suite 19.2 to interoperate with Avaya Aura® Experience Portal 8.0.

In the compliance testing, LumenVox used Media Resource Control Protocol (MRCP) version 2 to provide Automatic Speech Recognizer (ASR), Text-to-Speech (TTS), and Call Progress Analysis (CPA) capabilities for Experience Portal applications.

2. General Test Approach and Test Results

The feature test cases were performed manually with incoming calls from PSTN and Avaya H.323 and SIP endpoints to Experience Portal to invoke sample VXML applications that used LumenVox for ASR and TTS.

The CPA test cases were performed by sending audio types such as answering machine tone directly to LumenVox and verifying proper detection. This was accomplished by using a LumenVox utility via Linux shell to feed pertinent audio files and verify proper detection results.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to LumenVox.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly-defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For testing associated with these Application Notes, the interfaces between Avaya systems and LumenVox did not include use of any specific encryption features.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on LumenVox:

- Communication with Experience Portal via MRCP V2.
- ASR and TTS capabilities invoked by incoming calls to sample VXML applications on Experience Portal, and CPA capabilities invoked by a LumenVox utility via the Linux shell.
- ASR capabilities including DTMF, built-in grammars, menu grammars, internal grammars, and external grammars.
- TTS capabilities including male and female voices and prosody to change rate, volume, and pitch of voices.
- CPA capabilities including live person, answering machine, fax, and special information tone detection.
- Proper responses for scenarios involving invalid input and missing input from caller.

The serviceability testing focused on verifying the ability of LumenVox to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to LumenVox.

2.2. Test Results

All test cases were executed and verified. The following is the observation on LumenVox from the compliance testing.

- The current release of LumenVox does not support G.729 and requires the G.711 codec to be configured on Experience Portal. Note that the G.711 codec variants are enabled on Experience Portal by default, and the MPP Server VoIP Settings were checked to make certain the proper G711 codec variant remains enabled as shown in **Section 5.5**.

2.3. Support

Technical support on LumenVox can be obtained through the following:

- **Phone:** (858) 707-7700
- **Web:** <https://www.lumenvox.com/support>
- **Email:** support@LumenVox.com

3. Reference Configuration

The configuration used for the compliance testing is shown in **Figure 1**.

The detailed administration of basic connectivity between Communication Manager, Experience Portal, System Manager, and Session Manager are not the focus of these Application Notes and will not be described.

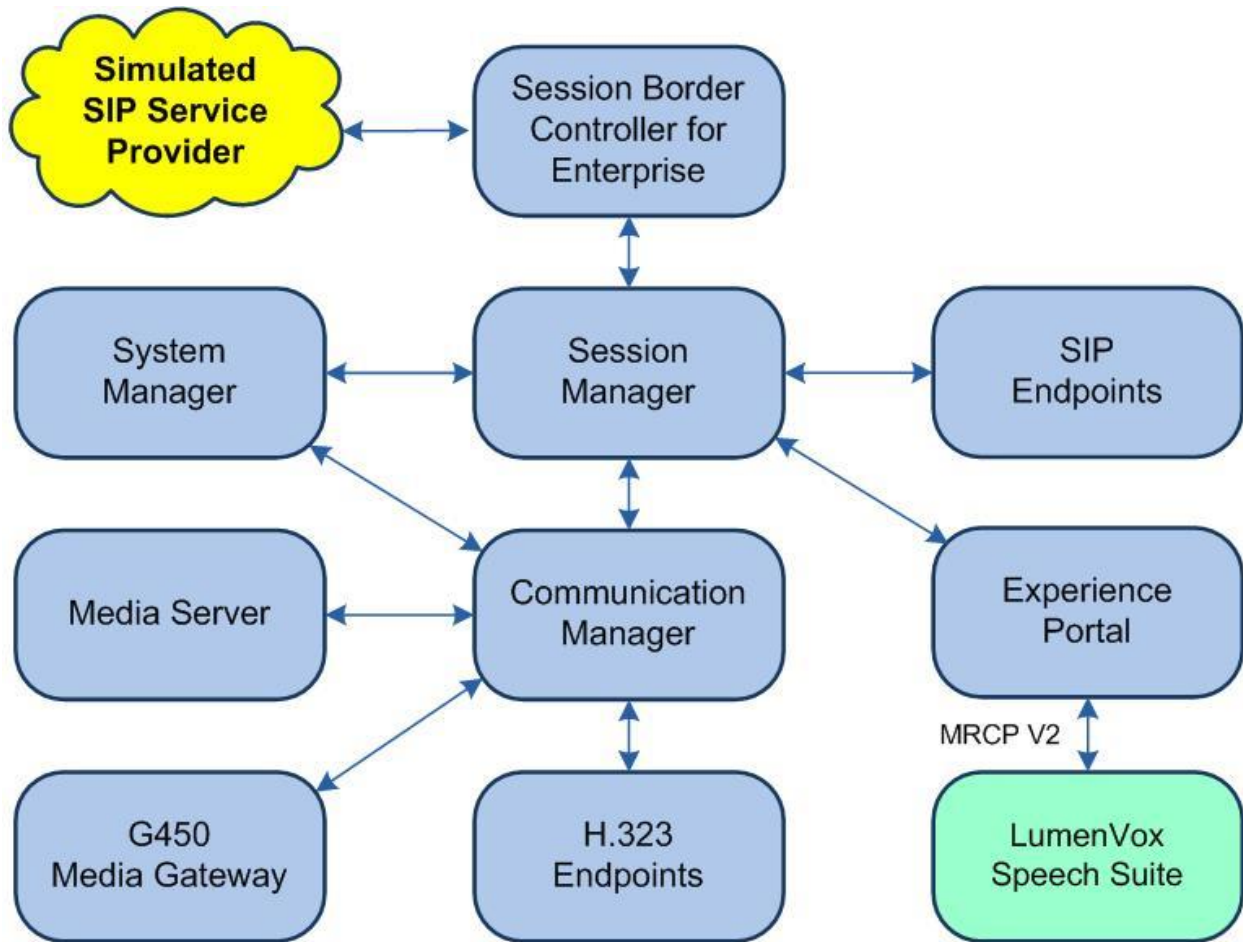


Figure 1: Compliance Testing Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Communication Manager in Virtual Environment	8.1.3 (8.1.3.0.1.890.26685)
Avaya G650 Media Gateway	NA
Avaya Aura® Media Server in Virtual Environment	8.0.2.138
Avaya Aura® Experience Portal in Virtual Environment	8.0 (8.0.0.0.1451)
Avaya Aura® Session Manager in Virtual Environment	8.1.3 (8.1.3.0.813014)
Avaya Aura® System Manager in Virtual Environment	8.1.3 (8.1.3.0.1012091)
Avaya J179 IP Deskphone (H.323)	6.8502
Avaya J169 IP Deskphone (SIP)	4.0.7.1.5
LumenVox Speech Suite on CentOS Linux	19.2.100 7.9.2009

5. Configure Avaya Aura® Experience Portal

This section provides the procedures for configuring Experience Portal. The procedures include the following areas:

- Administer language properties files
- Launch Experience Portal Manager
- Administer ASR server
- Administer TTS server
- Administer MPP VoIP settings
- Restart MPP server
- Administer application

5.1. Administer Language Properties Files

When adding an ASR server and TTS server on Experience Portal, the engine type option does not include LumenVox by default. For customers that prefer to have LumenVox appear in the engine type selection, two language properties files can be obtained from LumenVox to apply to Experience Portal.

Copy the **languages.properties_lib** and **languages.properties_webapps** files provided by LumenVox to the **/tmp** directory of the Experience Portal server containing the EPM component. Access the Linux shell of this server as super user.

Navigate to the **\$CATALINA_HOME/lib/config** directory. Enter the commands below to save a copy of the original **languages.properties** file, replace the current **languages.properties** file with **languages.properties_lib** provided by LumenVox, change ownership, group, and access permission for the file as shown below.

```
[xxxx@ep-epm ~]# cd $CATALINA_HOME/lib/config
[xxxx@ep-epm config]#
[xxxx@ep-epm config]# cp languages.properties languages.properties.orig
[xxxx@ep-epm config]#
[xxxx@ep-epm config]# mv /tmp/languages.properties_lib languages.properties
[xxxx@ep-epm config]#
[xxxx@ep-epm config]# chown avayavp languages.properties
[xxxx@ep-epm config]#
[xxxx@ep-epm config]# chgrp avayavpgroup languages.properties
[xxxx@ep-epm config]#
[xxxx@ep-epm config]# chmod 750 languages.properties
```

Navigate to the **\$CATALINA_HOME/webapps/VoicePortal/WEB-INF/classes/messages** directory. Enter the commands below to save a copy of the original **languages.properties** file, replace the current **languages.properties** file with **languages.properties_webapps** provided by LumenVox, change ownership, group, and access permission for the file as shown below.

```
[xxxx@ep-epm config]# cd $CATALINA_HOME/webapps/VoicePortal/WEB-INF/classes/messages
[xxxx@ep-epm messages]#
[xxxx@ep-epm messages]# cp languages.properties languages.properties.orig
[xxxx@ep-epm messages]#
[xxxx@ep-epm messages]# mv /tmp/languages.properties_webapps languages.properties
[xxxx@ep-epm messages]#
[xxxx@ep-epm messages]# chown avayavp languages.properties
[xxxx@ep-epm messages]#
[xxxx@ep-epm messages]# chgrp avayavpgroup languages.properties
[xxxx@ep-epm messages]#
[xxxx@ep-epm messages]# chmod 750 languages.properties
```

Navigate to the **\$CATALINA_HOME/bin** directory. Enter the commands below to restart Tomcat.

```
[xxxx@ep-epm messages]# cd $CATALINA_HOME/bin
[xxxx@ep-epm bin]#
[xxxx@ep-epm bin]# ./shutdown.sh
[xxxx@ep-epm bin]#
[xxxx@ep-epm bin]# ./startup.sh
```

5.2. Launch Experience Portal Manager

Access the Experience Portal Manager (EPM) web interface by using the URL “<https://ip-address>” in an Internet browser window, where “**ip-address**” is the IP address of the EPM server. The screen below is displayed. Log in using the appropriate credentials.



The image shows the login screen of the Avaya Experience Portal Manager. At the top, the Avaya logo is displayed in red. Below it, a red banner contains the text "Avaya Experience Portal 8.0.0 (ExperiencePortal)". The main area is white and contains a "User Name:" label followed by a text input field. Below the input field is a dark "Submit" button. At the bottom left, there is a link that says "Change Password".

The Avaya Experience Portal Manager screen is displayed next.



The image shows the main interface of the Avaya Experience Portal Manager. At the top, the Avaya logo is displayed in red. To the right of the logo, the text "Welcome" is displayed, followed by "Last logged in Aug 25, 2021 at 4:33:46 PM". Below this, a red banner contains the text "Avaya Experience Portal 8.0.0 (ExperiencePortal)". To the right of the banner are links for "Home", "Help", and "Logoff". Below the banner, there is a left sidebar with a list of menu items: "Expand All | Collapse All", "User Management" (with sub-items: Roles, Users, Login Options), "Real-time Monitoring" (with sub-items: System Monitor, Active Calls, Port Distribution), and "System Maintenance" (with sub-item: Audit Log Viewer). The main content area has a breadcrumb trail "You are here: Home" and a heading "Avaya Experience Portal Manager". Below the heading, there is a paragraph of text: "Avaya Experience Portal Manager (EPM) is the consolidated web-based application for administering Experience Portal. Through the EPM interface you can configure Experience Portal, check the status of an Experience Portal component, and generate reports related to system operation."

5.3. Administer ASR Server

Select **System Configuration** → **Speech Servers** from the left pane. In the **Speech Servers** screen (not shown), select the **ASR** tab followed by **Add**. The **Add ASR Server** screen is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **Engine Type:** “LumenVox”
- **Network Address:** IP address of the LumenVox server.
- **Selected Voices:** Select the desired languages.
- **Protocol:** “MRCP V2”

For **Total Number of Licensed ASR Resources**, enter the pertinent number of ASR license from LumenVox, in this case “10”.

AVAYA Welcome
Last logged in today at 10:35:04 AM EDT

Avaya Experience Portal 8.0.0 (ExperiencePortal) 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
Application Server
EPM Manager
MPP Manager
Software Upgrade
System Backup

▼ System Configuration
Applications
EPM Servers
MPP Servers
SNMP
Speech Servers
VoIP Connections
Zones

▼ Security
Certificates
Licensing

▼ Reports
Standard
Custom
Scheduled

▼ Multi-Media Configuration
Email
HTML
SMS

▼ POM
POM Home
POM Monitor

You are here: [Home](#) > [System Configuration](#) > [Speech Servers](#) > Add ASR Server

Add ASR Server

Use this page to configure Experience Portal to communicate with a new ASR server.

Name:

Enable: ☒ Yes ☐ No

Engine Type:

Network Address:

Base Port:

Total Number of Licensed ASR Resources:

New Connection per Session: ☒ Yes ☐ No

Languages

English(Australia) en-AU
English(India) en-IN
English(UK) en-GB
French(Canada) fr-CA
German(Germany) de-DE
Italian(Italy) it-IT
Portuguese(Brazil) pt-BR
Spanish(Colombia) es-CO
Spanish(Latin_American) es-MX

Selected Languages

English(USA) en-US

MRCP

Ping Interval: seconds

Response Timeout: seconds

Protocol:

Enable Session XML: ☐ Yes ☒ No

Transport Protocol:

Listener Port:

5.4. Administer TTS Server

Select **System Configuration** → **Speech Servers** from the left pane. In the **Speech Servers** screen (not shown), select the **TTS** tab followed by **Add**. The **Add TTS Server** screen is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **Engine Type:** “LumenVox”
- **Network Address:** IP address of the LumenVox server.
- **Selected Voices:** Select the desired voices.
- **Protocol:** “MRCP V2”

For **Total Number of Licensed TTS Resources**, enter the pertinent number of TTS license from LumenVox, in this case “10”.

AVAYA Welcome
Last logged in today at 10:35:04 AM EDT

Avaya Experience Portal 8.0.0 (ExperiencePortal) Home ? Help Logoff

Expand All | Collapse All

You are here: [Home](#) > [System Configuration](#) > [Speech Servers](#) > Add TTS Server

Add TTS Server

Use this page to configure Experience Portal to communicate with a new TTS server.

Name:

Enable: ☒ Yes ☐ No

Engine Type:

Network Address:

Base Port:

Total Number of Licensed TTS Resources:

New Connection per Session: ☒ Yes ☐ No

Voices

sv-SV Janna F
Danish(Denmark) da-DK Helsa F
Danish(Denmark) da-DK Mikkell M
Dutch(Netherlands) nl-NL Anneka F
Dutch(Netherlands) nl-NL Henrick M
English(Australia) en-AU Ian M
English(Australia) en-AU Molly F
English(India) en-IN Rani F
English(UK) en-GB Ben M

Selected Voices

English(USA) en-US Jackie F

MRCP

Ping Interval: seconds

Response Timeout: seconds

Protocol:

Enable Session XML: ☐ Yes ☒ No

Transport Protocol:

Listener Port:

Save **Cancel** **Help**

5.5. Administer MPP VoIP Settings

Select **System Configuration** → **MPP Servers** from the left pane. In the **MPP Servers** screen (not shown), select **VoIP Settings**.

The **VoIP Settings** screen is displayed. Expand the **Codecs** sub-section. Make certain that the pertinent G711 variant is checked in both **Offer** and **Answer** as shown below. Note that the G711 codec is required for interoperability with LumenVox.

AVAYA Welcome
Last logged in yesterday at 3:49:00 PM EDT

Avaya Experience Portal 8.0.0 (ExperiencePortal) 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**
 - Application Server
 - EPM Manager
 - MPP Manager
 - Software Upgrade
 - System Backup
- ▼ **System Configuration**
 - Applications
 - EPM Servers
 - MPP Servers
 - SNMP
 - Speech Servers
 - VoIP Connections
 - Zones
- ▼ **Security**
 - Certificates
 - Licensing
- ▼ **Reports**
 - Standard
 - Custom
 - Scheduled
- ▼ **Multi-Media Configuration**
 - Email
 - HTML
 - SMS
- ▼ **POM**
 - POM Home
 - POM Monitor

You are here: [Home](#) > [System Configuration](#) > [MPP Servers](#) > VoIP Settings

VoIP Settings

Voice over Internet Protocol (VoIP) is the process of sending voice data through a network using one or more standard protocols such as H.323 and Real-time Transfer Protocol (RTP). Use this page to configure parameters that affect how voice data is transferred through the network. Note that if you make any changes to this page, you must restart all MPPs.

Port Ranges ▶

RTCP Monitor Settings ▼

Host Address:

Port:

VoIP Audio Formats ▶

Codecs ▼

Offer

Enable	Codec	Order
<input checked="" type="checkbox"/>	G729	<input type="text" value="1"/>
<input checked="" type="checkbox"/>	G711uLaw	<input type="text" value="2"/>
<input checked="" type="checkbox"/>	G711aLaw	<input type="text" value="3"/>

Packet Time: milliseconds

G729 Discontinuous Transmission: ☒ Yes ☐ No

Answer

Enable	Codec	Order
<input checked="" type="checkbox"/>	G711uLaw	<input type="text" value="1"/>
<input checked="" type="checkbox"/>	G711aLaw	<input type="text" value="1"/>
<input checked="" type="checkbox"/>	G729	<input type="text" value="1"/>

G729 Discontinuous Transmission: ☐ Yes ☐ No ☒ Either

G729 Reduced Complexity Encoder: ☒ Yes ☐ No

5.6. Restart MPP Server

Select **System Management** → **MPP Manager** from the left pane to display the **MPP Servers** screen.

Select the pertinent **MPP** entry and click **Restart**, as shown below.

AVAYA Welcome
Last logged in today at 10:35:04 AM EDT

Avaya Experience Portal 8.0.0 (ExperiencePortal) Home ? Help Logoff

Expand All | Collapse All

You are here: [Home](#) > System Management > MPP Manager

MPP Manager (Aug 24, 2021 11:04:13 AM EDT)

This page displays the current state of each MPP in the Experience Portal system. To enable the state and mode commands, select one or more MPPs. To enable the mode commands, the selected MPPs must also be stopped.

Last Poll: Aug 24, 2021 11:04:01 AM EDT

<input checked="" type="checkbox"/>	Server Name	Mode	State	Config	Auto Restart	Restart Schedule	Active Calls		
						Today	Recurring	In	Out
<input checked="" type="checkbox"/>	MPP	Online	Running	OK	No	No	None	0	0

State Commands

Mode Commands

Restart/Reboot Options

☒ One server at a time
☐ All servers

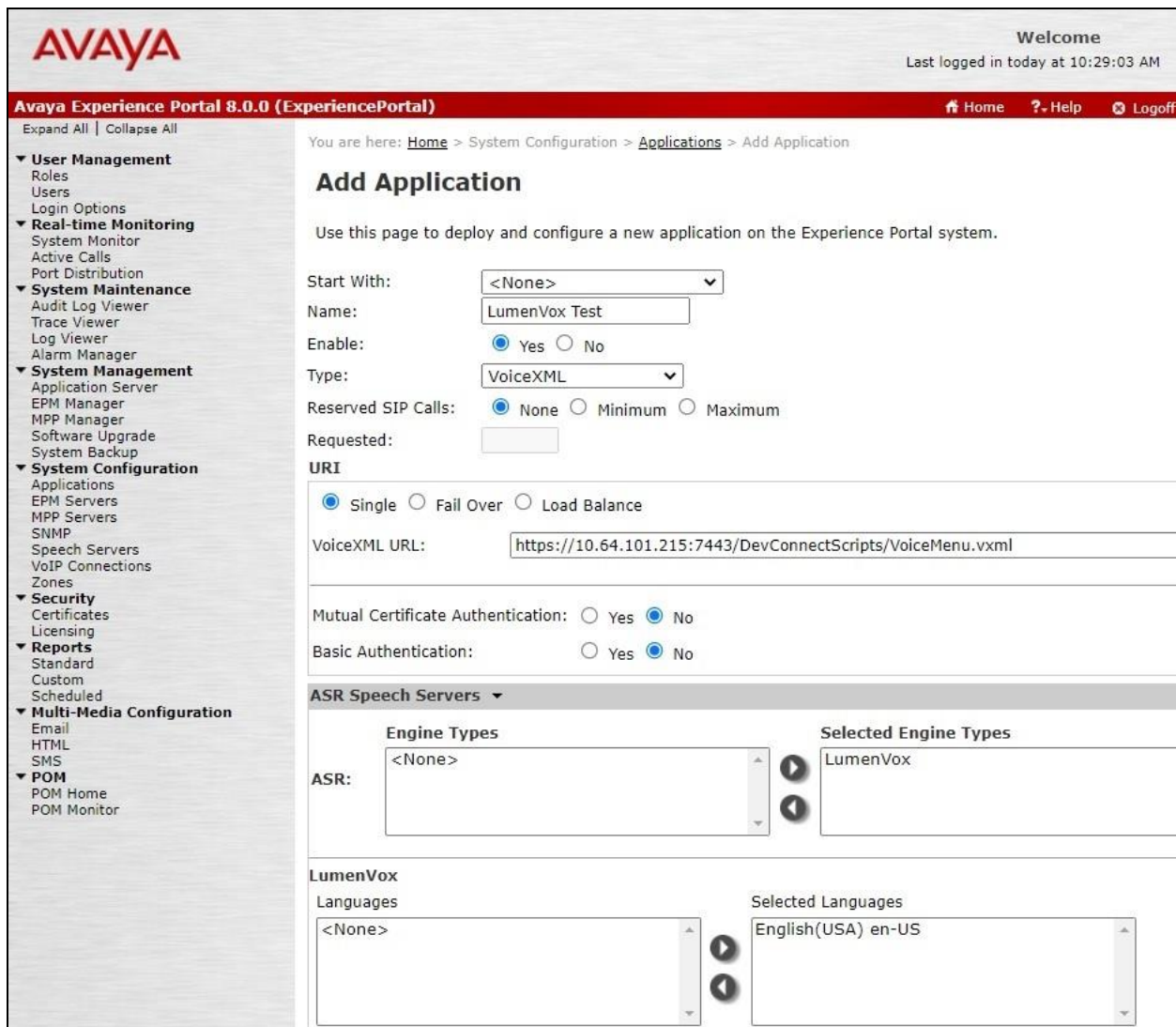
[Help](#)

5.7. Administer Application

Select **System Configuration** → **Applications** from the left pane. In the **Applications** screen (not shown), click **Add** to add a new application for testing with LumenVox.

The **Add Application** screen is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Name:** A descriptive name.
- **Type:** Select the pertinent application type, in this case “VoiceXML”.
- **VoiceXML URL:** The URL for the pertinent VXML test application.
- **ASR Engine Types:** Select “LumenVox”.
- **LumenVox Languages:** Select pertinent languages.



AVAYA Welcome
Last logged in today at 10:29:03 AM

Avaya Experience Portal 8.0.0 (ExperiencePortal) Home ? Help Logoff

Expand All | Collapse All

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

Add Application

Use this page to deploy and configure a new application on the Experience Portal system.

Start With:

Name:

Enable: ☒ Yes ☐ No

Type:

Reserved SIP Calls: ☒ None ☐ Minimum ☐ Maximum

Requested:

URI

☒ Single ☐ Fail Over ☐ Load Balance

VoiceXML URL:

Mutual Certificate Authentication: ☐ Yes ☒ No

Basic Authentication: ☐ Yes ☒ No

ASR Speech Servers

Engine Types	Selected Engine Types
<input type="text" value="<None>"/>	<input type="text" value="LumenVox"/>

LumenVox

Languages	Selected Languages
<input type="text" value="<None>"/>	<input type="text" value="English(USA) en-US"/>

Scroll down to the **TTS Speech Servers** and **Application Launch** sub-sections. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **TTS:** “LumenVox”
- **TTS Voices:** Select the desired voices.
- **Called Number:** An available number to associate with the application.

The screenshot shows the Avaya Experience Portal 8.0.0 (ExperiencePortal) interface. The top navigation bar includes the Avaya logo, a 'Welcome' message, and the last login time (10:29:03 AM). The main content area is divided into two sections: 'TTS Speech Servers' and 'Application Launch'.

TTS Speech Servers: This section contains a 'Voices' dropdown menu set to '<None>' and a 'Selected Voices' list showing 'English(USA) en-US Chris M' and 'English(USA) en-US Jackie F'. The 'TTS:' field is set to 'LumenVox'.

Application Launch: This section contains radio buttons for 'Inbound', 'Inbound Default', and 'Outbound'. The 'Number' radio button is selected. Below this, the 'Called Number' field is set to '78000' with an 'Add' button. A dropdown menu below the 'Called Number' field is set to '<None>' with a 'Remove' button. The 'SIP Header Source' dropdown is set to 'Any'.

The left sidebar contains a navigation menu with categories: User Management, Real-time Monitoring, System Maintenance, System Management, System Configuration, Security, and Reports.

Scroll down and expand the **Advanced Parameters** sub-section. Enable **Support Remote DTMF Processing** as shown below to allow LumenVox to perform DTMF processing instead of Experience Portal. Retain the default values in the remaining fields.

The screenshot shows the Avaya Experience Portal 8.0.0 (ExperiencePortal) interface, specifically the 'Advanced Parameters' section. The top navigation bar includes the Avaya logo, a 'Welcome' message, and the last login time (12:22:06 PM). The main content area is divided into two sections: 'Advanced Parameters' and 'Reporting Parameters'.

Advanced Parameters: This section contains several settings with radio buttons:

- Support Remote DTMF Processing:** Yes (selected), No
- DTMF Type Ahead Enabled:** Yes (selected), No
- Converse-On:** Yes, No (selected)
- Network Media Service:** Yes, No (selected)
- Early Media:** Yes, No (selected)
- Sync FROM and PAI Headers:** Yes, No (selected)

The left sidebar contains a navigation menu with categories: User Management, Real-time Monitoring, System Maintenance, System Management, System Configuration, Security, and Reports.

6. Configure LumenVox Speech Suite

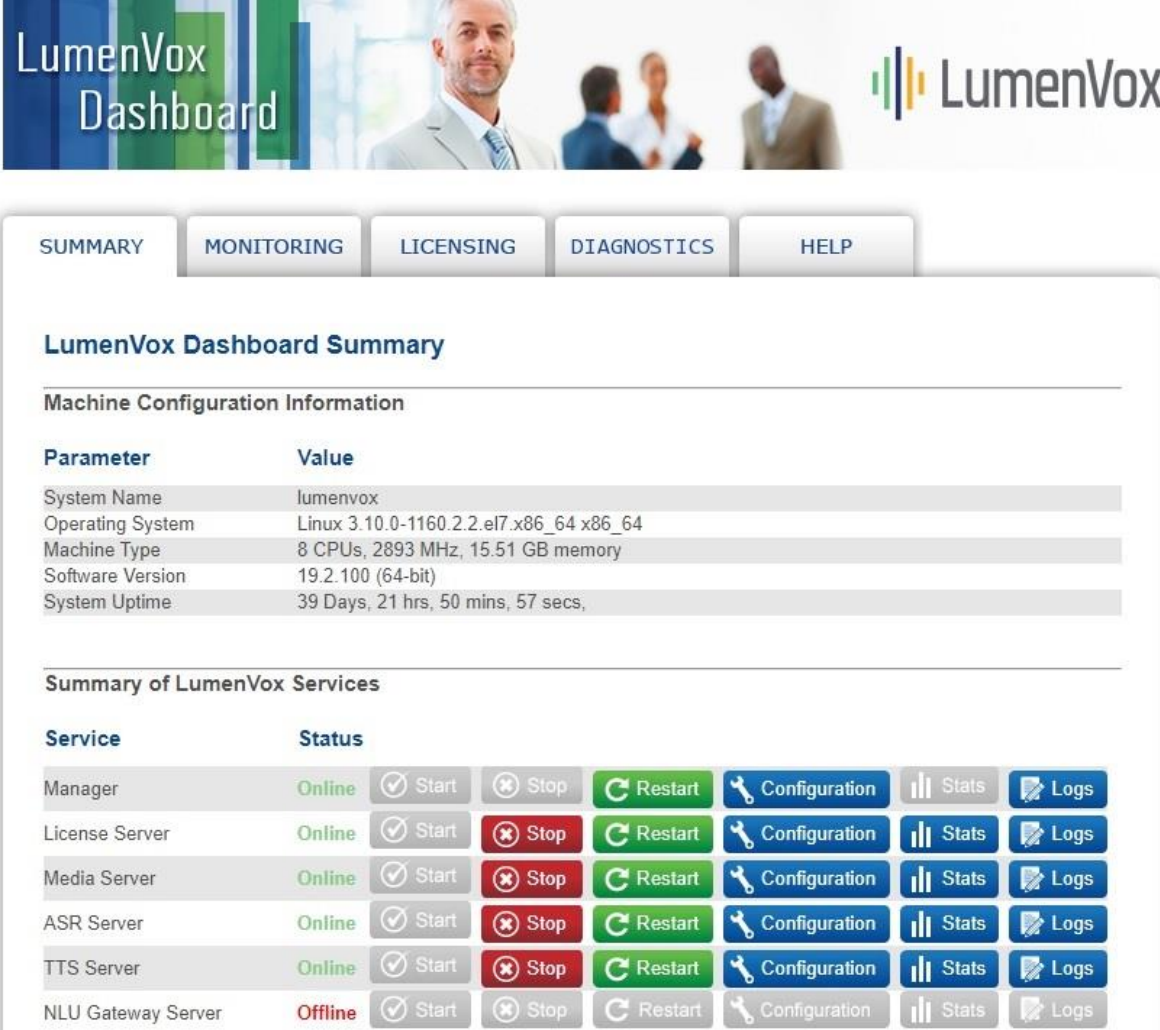
This section provides the procedures for configuring LumenVox. The procedures includes the following areas:

- Launch LumenVox Dashboard
- Administer Media Server

6.1. Launch LumenVox Dashboard

Access the LumenVox Dashboard web interface by using the URL “**http://ip-address:8080**” in an Internet browser window, where “**ip-address**” is the IP address of the LumenVox server. The **LumenVox Dashboard** screen is displayed, as shown below.

Locate the **Media Server** entry and select the associated **Configuration** button.



LumenVox Dashboard

SUMMARY MONITORING LICENSING DIAGNOSTICS HELP

LumenVox Dashboard Summary

Machine Configuration Information

Parameter	Value
System Name	lumenvox
Operating System	Linux 3.10.0-1160.2.2.el7.x86_64 x86_64
Machine Type	8 CPUs, 2893 MHz, 15.51 GB memory
Software Version	19.2.100 (64-bit)
System Uptime	39 Days, 21 hrs, 50 mins, 57 secs,

Summary of LumenVox Services

Service	Status	Start	Stop	Restart	Configuration	Stats	Logs
Manager	Online	Start	Stop	Restart	Configuration	Stats	Logs
License Server	Online	Start	Stop	Restart	Configuration	Stats	Logs
Media Server	Online	Start	Stop	Restart	Configuration	Stats	Logs
ASR Server	Online	Start	Stop	Restart	Configuration	Stats	Logs
TTS Server	Online	Start	Stop	Restart	Configuration	Stats	Logs
NLU Gateway Server	Offline	Start	Stop	Restart	Configuration	Stats	Logs

6.2. Administer Media Server

The **Media Server Configuration Information** screen is displayed. Select the **Advanced** (not shown) view toward the top right of screen.

In the **GLOBAL** sub-section, set **MRCP_SERVER_IP** to the IP address of the LumenVox server.

The screenshot shows the 'Media Server Configuration Information' screen with tabs for SUMMARY, MONITORING, LICENSING, DIAGNOSTICS, and HELP. The 'Summary' tab is selected, showing a breadcrumb 'Summary > Media Server > Configuration'. Below the title, there are 'Basic' and 'Advanced' tabs, with 'Advanced' being the active view. The 'GLOBAL' section contains a table with the following parameters:

Parameter	Value	Default	Description
MRCP_SERVER_IP	<input type="text" value="10.64.102.102"/>	127.0.0.1	IP address of local machine to use when
MRCP_SERVER_PORT_BASE	<input type="text" value="20000"/>	20000	Lowest numbered port that will be used
RTP_SERVER_PORT_BASE	<input type="text" value="25000"/>	25000	Lowest numbered port that will be used
NUM_CHANNELS	<input type="text" value="200"/>	200	Maximum number of channels

Scroll down to locate the **SIP_PORT** parameter and make certain that the value matches to the base port value for ASR server in **Section 5.3** and for TTS server in **Section 5.4**.

Locate the **REUSE_SIP_TCP_SOCKET** parameter at the end of this sub-section and toggle the setting to **ENABLED** as shown below. Note that this setting retains the socket connection on LumenVox at the end of ASR and TTS exchanges, which is required by Experience Portal.

NUM_RTP_EVENT_THREADS	<input type="text" value="auto"/>	auto	Number of RTP processing threads
SIP_PORT	<input type="text" value="5060"/>	5060	Port used for SIP communication
SIPS_PORT	<input type="text" value="5061"/>	5061	Port used for SIPS communication
RTSP_PORT	<input type="text" value="554"/>	554	Port used for RTSP communication
OUT_OF_SERVICE	<input type="radio"/> DISABLED	0 (disabled)	If enabled (1), will force any new sess
RTSP_OUT_OF_SERVICE_CODE	<input type="text" value="404 (Not Found)"/>	404 (Not Found)	RTSP Out Of Service Code
SIP_OUT_OF_SERVICE_CODE	<input type="text" value="503 (Service Unavailable)"/>	503 (Service Unavailable)	SIP Out Of Service Code
MAX_NUM_RTP_PACKETS_BUFFERED	<input type="text" value="0"/>	0	Number of unprocessed RTP packets
MAX_RTP_PACKET_SIZE	<input type="text" value="200"/>	200	Maximum size of received RTP packe
SIPS_SSL_CERT_FILE	<input type="text"/>		Specifies full path to SSL certificate (*)
SIPS_CIPHER_LIST	<input type="text"/>		Optional Cipher List to use during SIP
REUSE_SIP_TCP_SOCKET	<input checked="" type="checkbox"/> ENABLED	0 (disabled)	If enabled (1), the socket will remain c

Scroll down to the **VENDORSPECIFIC** sub-section. Set **COMPATIBILITY_MODE** to “1” as shown below. Note that this setting is required for LumenVox to encode responses in the format expected by Experience Portal.

[VENDORSPECIFIC]			
Parameter	Value	Default	Description
WIND_BACK_TIME	<input type="text" value="480"/>	480	Milliseconds of audio prior to V
BARGE_IN_TIMEOUT	<input type="text" value="15000"/>	15000	Default number of milliseconds
END_OF_SPEECH_TIMEOUT	<input type="text" value="20000"/>	20000	Default number of milliseconds before timing out
VAD_STREAM_INIT_DELAY	<input type="text" value="100"/>	100	Amount non-speech-data before
VAD_BARGEIN_THRESHOLD	<input type="text" value="50"/>	50	Adjusts the setting of how sure bargein
COMPATIBILITY_MODE	<input type="text" value="1"/>	0	Enables compatibility encoding
SECURE_CONTEXT	<input type="text" value="0"/>	0	When set to 1, sensitive recogn
TTS_SECURE_CONTEXT	<input type="text" value="0"/>	0	When set to 1, sensitive synthe

Scroll down to the **Client Property Configuration** sub-section. For customers with application scripts requiring external files to be accessed by LumenVox via secured HTTPS connection, follow LumenVox documentation to install the CA certificate supplied by the customer or disable **SSL_VERIFYPEER** if desired.

In the compliance testing, several application scripts required HTTPS access to external grammar files and the **SSL_VERIFYPEER** parameter was disabled for simplicity.

Client Property Configuration			
[GLOBAL]			
Parameter	Value	Default	Description
LICENSE_SERVERS	<input type="text" value="127.0.0.1:7569"/>	127.0.0.1	Semicolon delimited list of Lic
LICENSE_CACHE_PERIOD	<input type="text" value="30"/>	30	Time (in seconds) a released
LOGGING_VERBOSITY	<input type="text" value="10"/>	1 (Low)	Controls the verbosity of ever
SSL_VERIFYPEER	<input type="radio"/> DISABLED	1 (enabled)	Enables HTTP peer certificat
CERTIFICATE_AUTHORITY_FILE	<input type="text"/>		Path to the file used to verify

7. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Experience Portal and LumenVox.

From the EPM web interface, select **Real-time Monitoring** → **System Monitor** from the left pane to display the **System Monitor** screen in the right pane.

Select the **ExperiencePortal Details** tab followed by the applicable **MPP** entry.

AVAYA Welcome
Last logged in today at 10:35:04 AM EDT

Avaya Experience Portal 8.0.0 (ExperiencePortal) 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
Application Server
EPM Manager
MPP Manager
Software Upgrade
System Backup

▼ System Configuration
Applications
EPM Servers
MPP Servers
SNMP
Speech Servers
VoIP Connections
Zones

▼ Security
Certificates

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

System Monitor (Aug 24, 2021 11:31:35 AM EDT)

[Refresh](#) [Export](#)

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

Summary ExperiencePortal Details

Last Poll: Aug 24, 2021 11:31:17 AM EDT

Server Name	Type	Mode	State	Config	Call Capacity		Active Calls		Calls Today	Alarms	
					Current	Licensed Maximum	In	Out			
EPM	EPM	Online	Running	OK							
MPP	MPP	Online	Running	OK	10	10	10	0	0	3	
Summary					10	10	10			3	

[Help](#)

The **MPP Details** screen is displayed. Select **Service Menu** toward the bottom of the screen to launch the Media Server Service Menu.

AVAYA Welcome
Last logged in today at 10:35:04 AM EDT

Avaya Experience Portal 8.0.0 (ExperiencePortal) Home Help Logoff

Expand All | Collapse All

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

MPP Details (Aug 24, 2021 11:31:54 AM EDT)

[Refresh](#)

This page displays the detailed status of the selected MPP server.

General Information

Server Name: MPP
Unique Id: 10001
Host Address: 10.64.101.216
IP Address: 10.64.101.216
Version: 8.0.0.0.1451
Last Successful Poll: Aug 24, 2021 11:31:39 AM EDT

Operational State

Current State: Running (Since Aug 24, 2021 11:06:10 AM EDT)

Operational Mode

Current Mode: Online (Since May 24, 2021 3:01:18 PM EDT)

Configuration [History](#)

Current State: OK
Last Modified: Aug 24, 2021 11:03:58 AM EDT

Call Status

Current Capacity: 10
Licenses Allocated: 10
Maximum Call Capacity: 10
Active Calls: 0
Calls Today: 3

Resource Status

CPU: 1%
Memory: 3%
Disk: 9%

Miscellaneous

[Service Menu](#)

The **Avaya Experience Portal MPP** screen is launched and displayed. Select **Resources** → **Speech Servers** from the left pane to display the **Speech Servers** screen in the right pane.

Verify that there are two entries for LumenVox with **Status** of “**Server is UP**” for both, as shown below.

AVAYA Welcome

Avaya Experience Portal MPP 8.0.0.0.1451 on ep-mpp.dr220.com

You are here: [Home](#) > [Resources](#) > Speech Servers

Speech Servers

Name	Type	Status	Values	Ports	Errors	Latency
LumenVox ASR	ASR	Server is UP	H (Simultaneous): 10 M (Total): 10	Active: 0 Reserve: 0	Timeout: 0 Setup: 0 Application: 0	Average: 12 Maximum: 190 Minimum: 0
LumenVox TTS	TTS	Server is UP	H (Simultaneous): 10 M (Total): 10	Active: 0 Reserve: 0	Timeout: 0 Setup: 0 Application: 0	Average: 340 Maximum: 2720 Minimum: 0

Tue Aug 24 14:06:04 2021

8. Conclusion

These Application Notes describe the configuration steps required for LumenVox Speech Suite 19.2 to interoperate with Avaya Experience Portal 8.0. All feature and serviceability test cases were completed with an observation noted in **Section 2.2**.

9. Additional References

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

1. *Administering Avaya Aura® Communication Manager*, Release 8.1.x, Issue 8, November 2020, available at <http://support.avaya.com>.
2. *Administering Avaya Experience Portal*, Release 8.0, Issue 1.1, October 2020, available at <http://support.avaya.com>.

LumenVox documentation is available at <https://www.lumenvox.com/knowledgebase>.

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