



Avaya Solution & Interoperability Test Lab

Application Notes for Speech Technology Center Voice Navigator 8 with Avaya Aura® Experience Portal 7.0.1 - Issue 1.0

Abstract

These application notes describe the configuration steps required for Speech Technology Center Voice Navigator 8 to successfully interoperate with Avaya Aura® Experience Portal 7.0.1. Voice Navigator ASR and TTS features allow Voice XML applications to play written text and understand spoken and DTMF entries.

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 Speech Technology Center Voice Navigator 8 to successfully interoperate with Avaya Aura® Experience Portal 7.0.1. The Voice Navigator server is added as a Speech Server on the Experience Portal Management Server. Using Voice XML sample applications the following aspects of Voice Navigator operation was tested

- TTS Playback.
- DTMF recognition using different grammar types.
- Voice recognition using different grammar types.
- Serviceability.

2. General Test Approach and Test Results

The general test approach was to configure Voice Navigator ASR and TTS to communicate with Experience Portal as implemented on a customer's premise. See **Figure 1** for a network diagram. The interoperability compliance testing included feature and serviceability testing. The feature testing verified the ability of Voice Navigator to play prompts and process DTMF and Voice prompts made during Voice XML calls. Responses were prompt and accurate. The serviceability testing introduced failure scenarios to see if Voice Navigator can resume after a failure.

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.

2.1. Interoperability Compliance Testing

The testing included:

- Verification of connectivity between Voice Navigator and Experience Portal.
- Verification that handset DTMF input was processed and output by Voice Navigator correctly.
- Link Failure\Recovery was also tested to ensure successful reconnection after link failure.
- Scenarios included.
 - Voice prompt playback including speed and pitch changes
 - DTMF entry playback and menu entry recognition
 - Voice entry playback and menu entry recognition

2.2. Test Results

Tests were performed to ensure full interoperability between Voice Navigator and Experience Portal. The tests were all functional in nature and performance testing was not included. All test cases passed successfully and only the following observations were noted.

- Currently Voice Navigator must be administered as a Nuance type.
- External grammar of type ABNF is not support in the current version.

2.3. Support

Web: <http://speechpro.com>

Email: support@speechpro.com

Speech Technology Center Ltd.

Address: ulitsa Krasutskogo, 4, St. Petersburg, Russia

Telephone: +78123258848

Website: <http://speechpro.com>

3. Reference Configuration

Figure 1 illustrates the network topology used during compliance testing. The Avaya solution consists of Experience Portal, Communication Manager, System Manager, Session Manager and a G450 Gateway. The Experience Portal is configured to connect the Voice Navigator server over IP. A variety of Avaya 9600 Series H323 and SIP IP Deskphones were used to generate calls to Experience Portal applications.

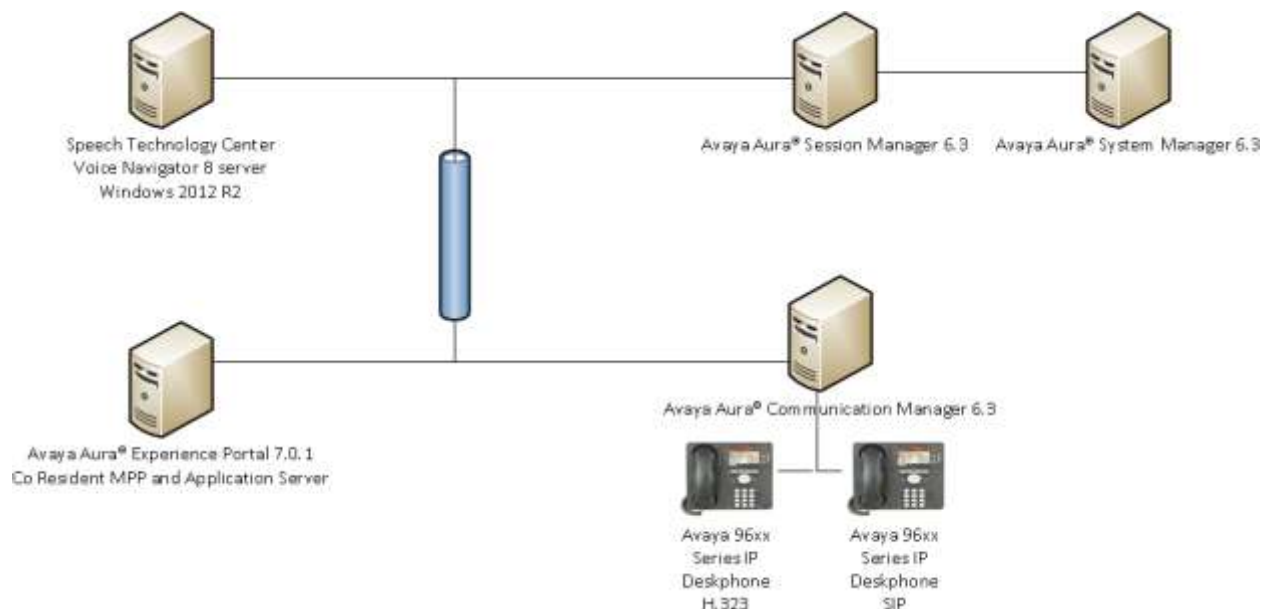


Figure 1: Avaya Aura® Experience Portal and Voice Navigator Reference Configuration

4. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Aura® Experience Portal running on a virtual server	7.0.1.0.1601
Avaya Aura® Session Manager running on a virtual server	Session Manager R 6.3 SP11 Build No. - 6.3.11.0.631103
Avaya Aura® System Manager running on a virtual server	System Manager R 6.3 SP12 Build No. – 6.3.0.8.5682-6.3.8.4903
Avaya Aura® Communication Manager running on a virtual server	R6.3 SP9 Build No. - R16x.03.0.124.0-12754
Avaya G450 Media Gateway	33.12.0/1
Avaya 9640 IP Deskphone	96x0 H.323 Release 3.2
Avaya 9640 IP Deskphone	96x0 SIP Release 6.2.1.26
Speech Technology Center Voice Navigator	Version 8.2.5

5. Configure Avaya Aura® Experience Portal

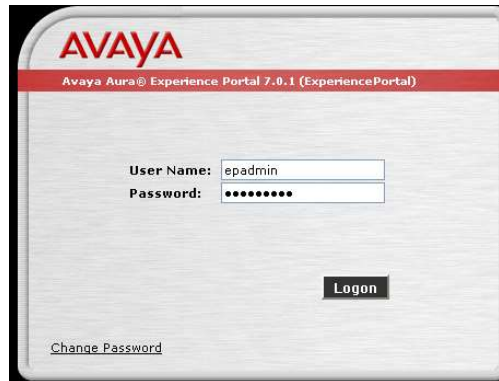
Configuration and verification operations on the Experience Portal illustrated in this section were all performed using either the Experience Portal Management web interface or SSH connection to the server . The information provided in this section describes the configuration of the Experience Portal for this solution. It is implied a working system is already in place, including Media Processing Platform, Apache Tomcat application server and SIP routing via Session Manager. Installation of Voice XML applications is also out with the scope of this document. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Add Voice Navigator speech server
- Configure Application

5.1. Add Voice Navigator Speech Server

Voice Navigator must be added as a Speech Server using the Experience Portal Manager web interface.

- Log into the Experience Portal Manager web interface.



- From the left hand menu go to **System Configuration** → **Speech Servers**. On the ASR tab click on **Add** (not shown).
- Give the Speech Server a name.
- Select **Nuance** from the **Engine Type** drop down.
- Enter the **IP Address** of the Voice Navigator server.
- Select the **Languages** required using **Ctrl** to select multiple languages.
- Remove the directories from the **RTSP URL** entry and add **:<port>/asr**.

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:

Norwegian(Norway) no-NO

Polish(Poland) pl-PL

Portuguese(Brazil) pt-BR

Portuguese(Portugal) pt-PT

Russian(Russia) ru-RU

Slovak(Slovakia) sk-SK

MRCP

Ping Interval: seconds

Response Timeout: seconds

Protocol:

RTSP URL:

- This configuration must be repeated on the **TTS** tab (not shown).
- The only difference is that for the **RTSP URL** entry add **:<port>/tts**
- When the ASR and TTS servers are added the MPP/s need to be restarted.

5.2. Configure Application

This section shows how to add the Voice Navigator Speech Server to an application configuration.

- From the left hand menu go to **System Configuration** → **Applications** and click on **Add** (not shown).
- Select **VoiceXML** as the **Type**.
- Select **Nuance** as the **ASR** and **TTS** Speech Server.
- Choose the **Languages** the Application requires.
- Set **Support Remote DTMF Processing** as **Yes**.

Use this page to change the configuration of an application.

Name: SpeechproTest

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

Speech Servers

ASR: TTS:

Languages: Voices:

Application Launch

☒ Inbound ☐ Inbound Default ☐ Outbound

☒ Number ☐ Number Range ☐ URI

Called Number:

Speech Parameters ▸

Reporting Parameters ▸

Advanced Parameters ▾

Support Remote DTMF Processing: ☒ Yes ☐ No

6. Configure Speech Technology Center Voice Navigator

The following sections describe the steps required to configure the base configuration required to enable Voice Navigator to interoperate with Experience Portal. It is implied a working system is already in place. For all other provisioning information such as initial installation and configuration, please refer to the product documentation in **Section 9**. The configuration operations described in this section can be summarized as follows:

- Configure MRCP

6.1. Configure MRCP

The Platform Type must be set and the port for connection checked. Default for both Voice Navigator and Experience Portal is **8000**.

- From Windows search for **MRCP Configuration Management tool**.
- Enter the **Compatibility** as **Avaya 5.X**.
- Enter the Voice Navigator server IP address as **Server host address**.

1. Общие настройки	
Used MRCP version	MRCPv1
Compatibility	Avaya 5.X
Server host address	10.10.16.11
External host address	
Таймаут отключения неактивного rtsp клиента	1
Таймаут отключения неактивной rtsp сессии	1
Настройка прокси	1

2. Настройки протокола RTP	
RTP start port	32768
RTP ports number	8192

3. Настройки протокола MRCPv1	
RTSP server port	8000
Resource location	
Speech synthesizer	tts
Speech recognizer	asr

4. Настройки протокола MRCPv2	
SIP server port	5060
MRCPv2 server port	6000

Used MRCP version
Выбор набора протоколов. Возможна работа с использованием протоколов MRCP версий 1 и 2.

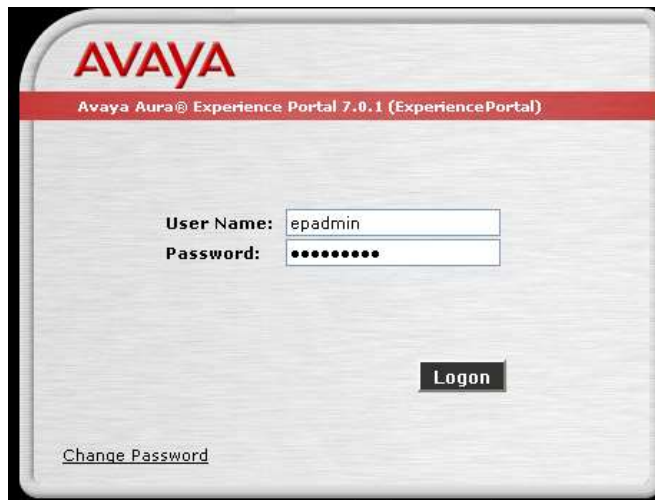
< Назад Далее > Отмена

7. Verification Steps

This section provides tests that can be performed to verify correct configuration of the Experience Portal and Voice Navigator solution.

7.1. Verify Speech Server Connection is Established

- Log into Experience Portal Manager web interface.



- From the left hand menu go to **Real-time Monitoring** → **System Monitor**.
- Click on the **MPP**.

This page displays the current state of the local Experience Portal system plus any remote Experience Portal s: symbols, click Help.

Summary ExperiencePortal Details

Last Poll: May 26, 2015 5:18:10 AM PDT

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

- From the MPP screen click on **Service Menu**.

LocalMPP Details (May 26, 2015 5:20:35 AM PDT)

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

General Information

Server Name: LocalMPP
Unique Id: 10000
Host Address: AAEP1619VB
IP Address: 10.10.16.19
Version: 7.0.1.0.1601
Last Successful Poll: May 26, 2015 5:20:22 AM PDT

Operational State

Current State: Running (Since May 25, 2015 10:41:53 AM PDT)

Operational Mode

Current Mode: Online (Since May 25, 2015 9:10:31 AM PDT)

Configuration [History](#)

Current State: OK
Last Modified: May 25, 2015 9:56:07 AM PDT

Call Status

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

Resource Status

CPU: 3%
Memory: 26%
Disk: 19%

Miscellaneous

[Service Menu](#)

[Configure](#)

[Help](#)

- From the left hand menu select **Diagnostics** and click on **Check connections to servers**.

Avaya Aura® Experience Portal MPP 7.0.1.0-1601 on AAEP1619VB

You are here: [Home](#) > [Diagnostics](#)

Diagnostics

[Check connections to servers](#)

[Pack files](#)

[View process messages](#)

[Version](#)

Tue May 26 05:21:56 2015

Home

Activity

[Calls](#)

[Sessions](#)

Applications

[Statistics](#)

Certificates

Configuration

Diagnostics

Logs

- The **ASR** and **TTS** servers are listed and the **ICMP Check*** is **Success**

Speech Servers							
Type	Name	Address	Engine Type	Base Port	Languages/TTS Voices	ICMP Check*	Service Check
ASR	VoiceNavigatorASR	10.10.16.11	nuance osr	8000	ru-RU	Success	Check ASR Server
TTS	VoiceNavigatorTTS	10.10.16.11	nuance realspeak	8000	ru-RU:Юлия8000:female	Success	Check TTS Server

- Click on **Check TTS Server** to see the connection to Voice Navigator ASR and TTS on port 8000 was successfully opened.

Check Server Status

A connection to host 10.10.16.11 on port 8000 was successfully opened.

Tue Jun 2 08:41:32 2015

8. Conclusion

These Application Notes describe the compliance tested configuration used to validate Speech Technology Center Voice Navigator Version 8 with Avaya Aura® Experience Portal Version 7.0.1. A full and comprehensive set of feature and functional test cases were performed during compliance testing. Voice Navigator is considered compliant with Avaya Aura® Experience Portal. All test cases have passed with any issues and observations outlined in **Section 2.2**.

9. Additional References

These documents form part of the Avaya official technical reference documentation suite. Further information may be had from <http://support.avaya.com> or from your Avaya representative.

- [1] *Avaya Aura® Experience Portal 7.0.1 Overview and Specification*
- [2] *Deploying Avaya Aura® Experience Portal 7.0.1 in an Avaya Customer Experience Virtualized Environment*

Voice Navigator documentation can be obtained by using the contact details listed in **Section 2.3**.

©2015 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.