Avaya Solution & Interoperability Test Lab

Application Notes for Yandex Speechkit Speech Recognition 1.6 with Avaya Aura® Experience Portal 7.0.1 - Issue 1.0

Abstract

These application notes describe the configuration steps required for Yandex Speechkit Speech Recognition Software to successfully interoperate with Avaya Aura® Experience Portal. The Software allows Voice XML application 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.

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1. Introduction

These application notes describe the configuration steps required for Speechkit Speech Recognition Software to successfully interoperate with Avaya Aura® Experience Portal. The Speechkit Speech Recognition Server is added as a Speech Server on the Experience Portal Management Server as an ASR type. Using Voice XML sample applications the following aspects of Speechkit Speech Recognition operation was tested

- Voice recognition
- Voice replay
- Serviceability

2. General Test Approach and Test Results

The general test approach was to configure the Speechkit Speech Recognition Software to communicate with Experience Portal as implemented on a customer's premises. See **Figure 1** for a network diagram. The interoperability compliance testing included feature and serviceability testing. The feature testing verified the ability of Speechkit Speech Recognition to play prompts based on spoken responses made during Voice XML calls. Responses were prompt and accurate. The serviceability testing introduced failure scenarios to see if Speechkit Speech Recognition 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 Speechkit Speech Recognition and Experience Portal.
- Verification that handset input was processed and output by Speechkit Speech Recognition correctly.
- Link Failure\Recovery was also tested to ensure successful reconnection after link failure.
- Scenarios included.
  - Voice prompt playback including speed and pitch changes
  - Voice entry playback and menu entry recognition

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2.2. Test Results

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

- Currently Speechkit Speech Recognition must be administered as a Nuance type
- External grammar of type ABNF is not support in the current version

2.3. Support

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Email: voice@support.yandex.ru
Website: http://www.yandex.ru

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 Speechkit Speech Recognition server over IP. A variety of Avaya 9600 Series H323 and SIP phones were used to generate calls to Experience Portal Applications.
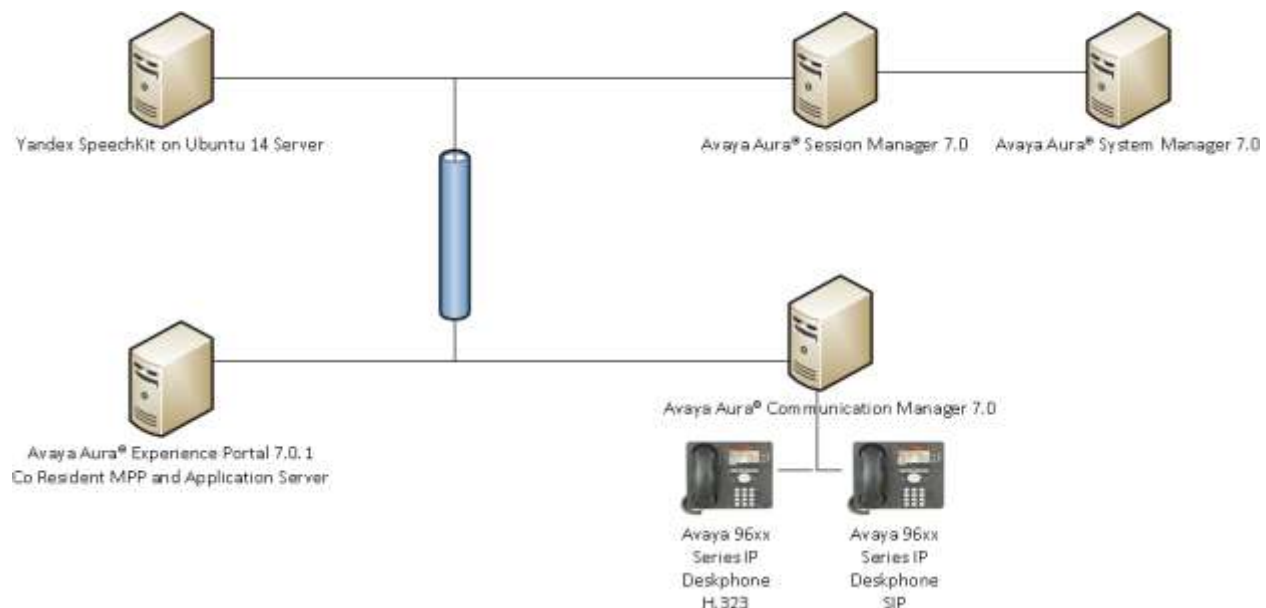

Figure 1: Avaya Aura® Experience Portal and Speechkit Speech Recognition Reference Configuration

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 7.0 SP1 Build No. – 7.0.0.0.700007
Avaya aura® System Manager running on a virtual server	System Manager R 7.0 SP1 Build No. – 7.0.0.0.16266-7.0.9.912
Avaya Aura® Communication Manager running on a virtual server	R7.0 FP1 Build No. – R17x.00.0.441.0-22438
Avaya G450 gateway	37.16.0
Avaya 9640 Series Deskphone	96x1 H.323 Release 3.2
Avaya 9640 Series Deskphone	96x1 SIP Release 6.2.1.26
Speechkit Speech Recognition	R1.6

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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 Speechkit as a Speech server
- Configure Application

5.1. Add Speechkit Speech Recognition Speech server

Speechkit Speech Recognition must be added as a Speech Server using the Experience Portal Manager web interface.

- log into the Experience Portal Manager web interface
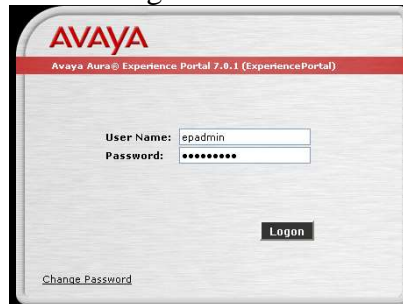
- From the left hand menu go to **System Configuration → Speech Servers**. On the ASR tab click on **Add**
- Give the Speech Server a name.
- Select **Nuance** from the **Engine Type** drop down.
- Enter the **IP Address** of the Speechkit Speech Recognition Server.
- Enter the **Total Number of Licensed ASR resources**.
- Select the **Languages** required using **Ctrl** to select multiple Languages.
- Click on **Save** to Add the ASR Server
- When the ASR server is added the MPP/s need to be restarted.

5.2. Configure Application

This section shows how to add the Speechkit Speech Recognition Server to an application configuration and allow it to process Voice recognition requests.

- From the left hand menu go to **System Configuration → Applications** and click on **Add**.
- Select **VoiceXML** as the **Type**.
- Select **Nuance** as the **ASR** Speech Server.
- Choose the **Languages** the Application requires.
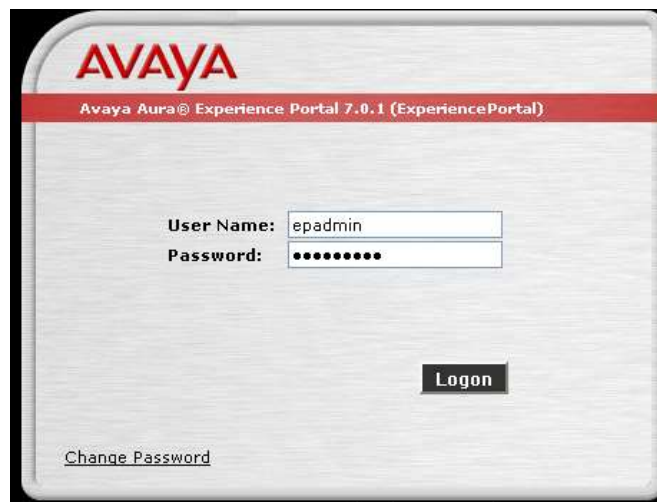
6. Configure Speechkit Speech Recognition

There are no further configuration steps required for Speechkit Speech Recognition after installation.

7. Verification Steps

This section provides tests that can be performed to verify correct configuration of the Experience Portal and Speechkit Speech Recognition 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**

- 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

Home

You are here: Home > Diagnostics

Activity
Calls
Sessions

Diagnostics

Check connections to servers
Pack files
View process messages
Version

Applications
Statistics

Tue May 26 05:21:56 2015

Certificates

Configuration

Diagnostics

Logs

- The **ASR** server is listed and the **ICMP Check*** is **Success**

Type	Name	Address	Engine Type	Base Port	Languages/TTS Voices	ICMP Check*	Service Check
ASR	Yandex ASR	10.10.16.90	nuance osr	8060	ru-RU	Success	Check ASR Server

- Click on Check ASR Server to see the connection to Speechkit Speech Recognition ASR on port 8060 was successfully opened.

Check Server Status

A connection to host *10.10.16.90* on port *8060* was successfully opened.

Thu Oct 29 03:15:17 2015

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8. Conclusion

These Application Notes describe the compliance tested configuration used to validate Speechkit Speech Recognition 1.6 ASR Server with Avaya Aura® Experience Portal Version 7.0.1. A full and comprehensive set of feature and functional test cases were preformed during Compliance testing. Speechkit Speech Recognition ASR Server is considered compliant with Avaya Aura® Experience Portal. All of the 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*

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

10. Change History

Should be used only if the Application Notes are being re-issued. It should contain the following table listing previous issue numbers and the dates of issue.

Issue	Date	Reason
1.0	06/02/2015	Initial issue

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