

Instructions for Configuring Speech Software for Cisco Unified Contact Center Express and Cisco Unified IP IVR 7.0

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Cisco® Unified Contact Center Express and Cisco Unified IP Interactive Voice Response (IP IVR) 7.0 use the Media Resource Control Protocol (MRCP) to enable them to interoperate in a standardized way with speech vendors that implement MRCP. However, each vendor imposes its own variations within the limits of the standards. Therefore, specific vendor software may not interoperate with Cisco Unified Contact Center Express and Cisco Unified IP IVR 7.0 without additional configuration.

In addition, Cisco has validated only four speech products for this purpose so far: Nuance Speech Server (NSS), Nuance SpeechWorks MediaServer (SWMS), Nuance MRCP 1.0, and IBM WebSphere Voice Server.

Configuration

This bulletin describes the additional items that must be configured for each of the vendor's software after it is installed for it to interoperate with Cisco Unified Contact Center Express and Cisco Unified IP IVR 7.0. It is assumed that the software has been installed according to the vendor's instructions.

Nuance Speech Server 5.0 Nuance Recognizer 9.0 RealSpeak 4.5

Location of the configuration files:

- **NSSserver.cfg** C:\Program Files\Nuance\Speech Server 5.0\server\config
- **Baseline.xml** C:\Program Files\Nuance\Recognizer\config

Changes Required to the NSSserver.cfg File

Setting the "timeout" value for all configurations:

- Retain the default for the following entries and ensure that they are not changed:
 - **server.mrcp1.transport.TCPTimeout** **VXInteger** **180**
 - **server.mrcp1.rtsp.sessionTimeout** **VXInteger** **60000**
 - **server.mrcp2.transport.timeout** **VXInteger** **20**

Setting the cache maximum size to "number of OSR licenses":

- Ensure that the following entries are set to the appropriate "Number of licenses" they represent:
 - **server.mrcp2.osrspeechrecog.cache.maxNumber** **VXInteger** **4**
Note: Ensure that it is equal to the number of Nuance OpenSpeech Recognizer (OSR) licenses.
 - **server.mrcp2.rsspeechsynth.cache.maxNumber** **VXInteger** **0**
Note: Ensure that it is equal to the number of Text To Speech (TTS) licenses.
 - **server.mrcp1.rsspeechsynth.cache.maxNumber** **VXInteger** **4**
Note: Ensure that it is equal to the number of RealSpeak licenses.
 - **server.mrcp1.osrspeechrecog.cache.maxNumber** **VXInteger** **4**
Note: Ensure that it is equal to the number of OSR licenses.

Configurations with automated speech recognition (ASR):

- Make the following modifications:
 - From:


```
server.mrcp1.resource.3.url VXIString media/speechrecognizer
server.mrcp1.resource.2.url VXIString media/speechsynthesizer
```
 - To:


```
server.mrcp1.resource.3.url VXIString /recognizer
server.mrcp1.resource.2.url VXIString /synthesizer
```

Setting the “startOfSpeechOnDTMF” to 0:

- Ensure that the value in the following entry is 0:
 - **server.mrcp1.osrspeechrecog.startOfSpeechOnDTMF** **VXIInteger** **0**

Changes Required to the Baseline.xml File

Ensure that the number of ports does not exceed the number of licenses (Real Speak and Nuance Recognizer licenses obtained from Nuance). By default it is set to check out 96 ports. Make the necessary updates in **Baseline.xml**.

For example, for 4-port evaluation licenses, it is shown as:

```
<!-- How many osr_swirec licenses will be checked out during SWIrecInit() -->
  <param name="swirec_license_ports">
    <value>4</value>
  </param>
<!-- How many osr_swiep licenses will be checked out during SWIepInit() -->
  <param name="swiep_license_ports">
    <value>4</value>
  </param>
```

Make the necessary changes in these values, per the Real Speak and Nuance Recognizer licenses obtained from Nuance.

After making these changes, you will need to restart the services as described in the vendor’s documentation.

Important notes:

- Nuance 9.0 will be configured through Unified Contact Center Express AppAdmin with MRCP ASR Provider Configuration page having Grammar Variant as OSR 3.1.x for MRCP ASR Provider and MRCP ASR Server Configuration page having MRCP ASR Server configured on Port Number 4900.
- Nuance 9.0 supports both MRCPv1 and v2, but in Cisco Unified Contact Center Express 7.0(1), only MRCPv1 is supported.
- Nuance Open Speech Dialog Modules (OSDMs) have not been certified on Cisco Unified Contact Center Express 7.0(1).

Nuance SWMS with Nuance OpenSpeech Recognizer and RealSpeak

Modify the SWMS server configuration file. The path name to the configuration file follows this format: C:\Program Files\SpeechWorks\MediaServer\Server\config\OSSserver.cfg.

Make the following modifications to the values of the specified keys as appropriate:

All configurations:

- Modify **server.transport.sessionTimeout** to **- 1**.

Configurations with automatic speech recognition (ASR):

- Modify **server.resource.2.url** to **/recognizer** and uncomment this line.
- Modify **server.ossrec.cache.maxNumber** so that it matches the number of Nuance OpenSpeech Recognizer (OSR) licenses and uncomment this line.
- Modify **server.session.ossrec.mrcp.startOfSpeechOnDTMF** to **0**.

Configurations with TTS:

- Modify **server.resource.4.url** to **/synthesizer** and uncomment this line.
- Modify **server.realspeak4.cache.maxNumber** to match the number of Nuance RealSpeak licenses and uncomment this line.

After making these changes, you will need to restart the services as described in the vendor's documentation.

Nuance MRCP 1.0 with Nuance 8.5 Speech Recognition and Vocalizer

Configurations with ASR:

- No change is needed.

Configurations with TTS:

- Modify the Nuance startup file. The path name to the startup file follows this format:
C:\Nuance\V8.5.0\mrcp\watcher.startup.
- Make the following modifications as appropriate:
 - Add the parameter **tts.ResourceName=en-US-female** to the command line for the Nuance Vocalizer TTS process (for the U.S. English female voice, which is the default). Also remember to update this value appropriately for different voice packs; for example, for the Australian English male voice, set the parameter to **en-AU-male**.
 - If you are running two or more vocalizer TTS processes on the same machine, you must set **tts.Port** and **dictionary.Port** parameters for all except one TTS process. The default value for **tts.Port** is **32323**, and the value for **dictionary.Port** is **22552**. For every additional vocalizer process, this parameter needs to be explicitly set to a number other than the default.
- If you are using the default 2-port license included with the Nuance Vocalizer installation and have not purchased licenses, you need to make the following changes to enable TTS to work. This situation is usually true if you are setting up TTS for demo or lab purposes. The Nuance startup file by default points to an invalid Nuance Vocalizer 4.0 license file. To correct it, modify the existing line for TTS Nuance License Manager (nlm) as follows:

From: nlm %MRCP%/voclicense.txt

To: nlm %VOCALIZER%/license.txt

After making these changes, you will need to restart the services as described in the vendor's documentation.

IBM WebSphere Voice Server

Configurations with ASR:

1. Stop IBM WebSphere Voice Server.
2. Choose Start > All Programs > IBM WebSphere > Application Server v5.1 > Administrator Console.
3. After logging in, you should see a page displaying voice servers. Select the desired server and click Stop.
4. Open a DOS window and browse to the folder C:\Program Files\WebSphere\VoiceServer\samples.
5. Type the following command at the DOS prompt (you may want to cut and paste to minimize errors):
putParam com.ibm.voice.server.rtsbridge.recourl /recognizer true
6. Make sure there are no errors. Then restart IBM WebSphere Voice Server.
7. Launch IBM WebSphere Application Server V5 - server1 from the Services window.
8. Choose Start > All Programs > IBM WebSphere > Application Server v5.1 > Administrator Console.
9. After logging in, you should see a page displaying voice servers. Make sure the status indicates "Started".

Configurations with TTS:

1. Stop IBM WebSphere Voice Server.
 2. Choose Start > All Programs > IBM WebSphere > Application Server v5.1 > Administrator Console.
 3. After logging in, you should see a page displaying voice servers. Select the desired server and click Stop.
 4. Open a DOS window and browse to the folder C:\Program Files\WebSphere\VoiceServer\samples.
 5. Type the following command at the DOS prompt (you may want to cut and paste to minimize errors):
putParam com.ibm.voice.server.rtsbridge.synthurl /synthesizer true
 6. Make sure there are no errors. Then restart IBM WebSphere Voice Server.
 7. Launch IBM WebSphere Application Server V5 - server1 from the Services window.
 8. Choose Start > All Programs > IBM WebSphere > Application Server v5.1 > Administrator Console.
- After logging in, you should see a page displaying voice servers. Make sure the status indicates "Started".



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