

Voices for rsFirstOfficer

There are two ways rsFirstOfficer can speak your checklist:

1. **Windows voice synthesizer** with local SAPI voices. This is very fast as the voices are stored locally on your PC so the Text-Speech response is virtually instantaneous. With Amazon dropping SAPI support for Polly (Sept 2023), the only real good voices I have found are from Cereproc.com. These are a bit pricey at £25 (or about \$32 USD) but if you only need one or two, it's a good way to go.
2. **Using an outside voice service.** The main advantage with this approach is the number of voices available and the advanced level of converting text, including punctuation, into very natural sounding voice. rsFirstOfficer supports Microsoft's Azure Text to Speech service.

I chose Azure as the API is better suited to rsFirstOfficer than Amazon or others.

The Free tier offers .5 million characters per month** which is plenty for voicing rsFirstOfficer flights. With a typical rsChecklist file being about 700 characters, you could make 20 flights a day, all month long, and still not exceed the free text to speech limit.

** <https://azure.microsoft.com/en-ca/pricing/details/cognitive-services/speech-services/>

Fast vs Slow for rsFirstOfficer Text to Speech.

The whole point of rsFirstOfficer is to provide you with a checklist system that is totally customizable. You can control anything/everything that is spoken on the flight deck. This is different from the systems that have pre-recorded voice snippets that you have no control over. These must be made for specific aircraft. With rsFirstOfficer you can easily create a new checklist for every aircraft you fly.

In order to accomplish this, rsFirstOfficer uses Text to Speech to voice your text based checklists.

With local voices (option 1 above), when rsFirstOfficer goes to speak a checklist item, it merely makes a TTS request to the local MS speech synthesizer and the words come out.

With an outside TTS service, a call is made to the service passing the text, then the service creates audio and sends it back to rsFirstOfficer. There is latency due to the network round trip of the service's server and back.

It is still usable, but you must accept there will be a 1 or 2 second delay between when a prompt is spoken and when you can acknowledge it with a response.

Setting up Azure Text to Speech

Step 1

Sign up for a Microsoft Azure account.

Yes, they will want a credit card ;-(but it should not be charged unless you find the free tier is not enough and you want to purchase more service.

Select the 'Try Text to Speech for Free' button this page..

<https://azure.microsoft.com/en-us/products/ai-services/text-to-speech/>

Step 2

Create a Speech Service. This will give you a Key and Region code that you enter into rsFirstOfficer.

Login to your account then go to this page to create a Speech service..

<https://portal.azure.com/#create/Microsoft.CognitiveServicesSpeechServices>

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home >

Create Speech Services

Basics Network Identity Tags Review + create

Transcribe audible speech into readable, searchable text. Add real-time speech translations to your apps and services. Convert text to audio nearly in real time. Quickly build speech-enabled apps and services using the programming languages you already work with. Customize speech systems to optimize quality for specific scenarios.

[Learn more](#)

Project Details

Subscription * ⓘ Azure subscription 1

Resource group * ⓘ rsFO

[Create new](#)

Instance Details

Region ⓘ

Name * ⓘ rsFirstOfficer ✓

OK Cancel

The free tier (F0) for this resource type is not available in the selected region.

Pricing tier * ⓘ Standard S0

[View full pricing details](#)

Previous Next **Review + create**

Create a Resource Group with any name you like.

Select your Region from the dropdown list.

Give your Service a name.

Select F0 Free pricing tier.

(As I already have mine setup, it is not showing F0 as an option but it will when you are first setting things up.)

Microsoft Azure

Upgrade

Search resources, services, and docs (G+)

Home >

Create Speech Services

BasicsNetworkIdentityTagsReview + create

Transcribe audible speech into readable, searchable text. Add real-time speech translations to your apps and services. Convert text to audio nearly in real time. Quickly build speech-enabled apps and services using the programming languages you already work with. Customize speech systems to optimize quality for specific scenarios.

[Learn more](#)

Project Details

Subscription * ⓘ

Azure subscription 1

Resource group * ⓘ

(New) rsFirstOfficer

[Create new](#)

Instance Details

Region ⓘ

Canada Central

Name * ⓘ

myNewSpeechService

ⓘ

The free tier (F0) for this resource type is already being used by your subscription, therefore it will not appear in the dropdown below.

Pricing tier * ⓘ

Standard S0

[View full pricing details](#)

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Step 3

You will be taken to your control page for the Speech service where you can get your Key and Region code for entering into rsFirstOfficer.

Microsoft Azure Upgrade Search resources, services, and docs (G+)

Home > rsFirstOfficer Speech service

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource Management

Keys and Endpoint

Encryption

Pricing tier

Networking

Identity

Cost analysis

Properties

Locks

Monitoring

Alerts

Metrics

Diagnostic settings

Logs

Automation

Tasks (preview)

Export template

Help

Delete

Location : Canada Central

Subscription (move) : Azure subscription 1

Subscription ID : 95b00000-0000-0000-0000-000000000000

Tags (edit) : Add tags

Endpoint

Manage keys

Get Started

Get started with your resource in Speech Studio

Try out all use cases and see other custom tools for building Speech AI models

Go to Speech Studio

Keys and endpoint

These keys are used to access your Azure AI service API. Do not share your keys. Store them securely-- for example, using Azure Key Vault. We also recommend regenerating these keys regularly. Only one key is necessary to make an API call. When regenerating the first key, you can use the second key for continued access to the service.

Show Keys

KEY 1

KEY 2

Location/Region ⓘ

canadacentral

Endpoint

https://canadacentral.api.cognitive.microsoft.com/

Settings

Basic Setup Azure Voices Setup

Use Azure Voices: ☒ Requires an Azure account to get a Key and Region code:

Azure Key:

Azure Region: canadacentral

Pilot Flying Voice: en-US-CoraNeural en-US-ElizabethNeural en-US-EricNeural

Pilot Monitoring Voice: en-US-EmmaNeural en-US-BrianNeural en-US-JennyNeural

Close

That's it you're good to go.