#### 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.

# 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.

<sup>\*\* &</sup>lt;a href="https://azure.microsoft.com/en-ca/pricing/details/cognitive-services/speech-services/">https://azure.microsoft.com/en-ca/pricing/details/cognitive-services/speech-services/</a>

# **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..

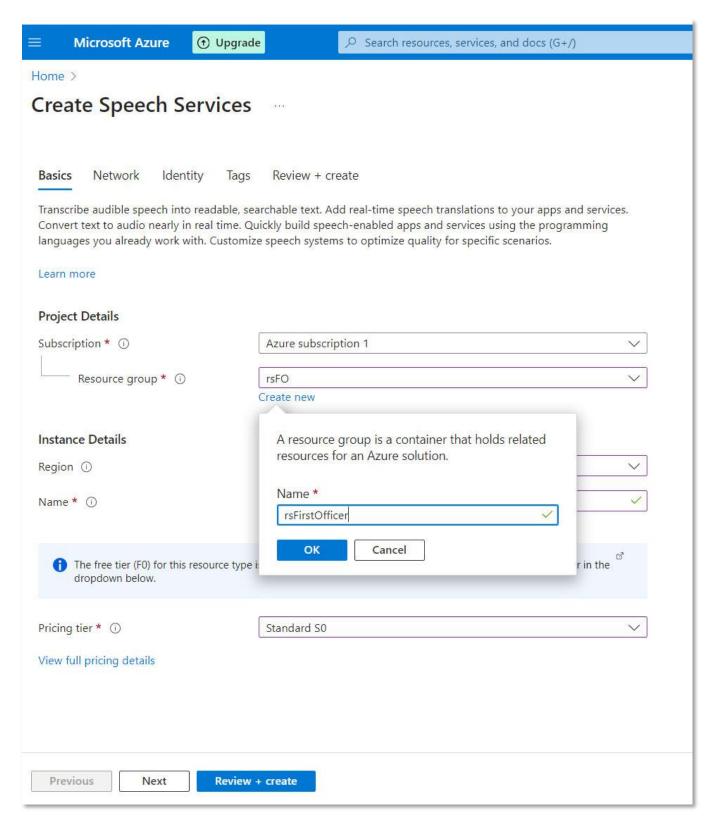
https://azure.microsoft.com/en-us/products/ai-services/text-to-speech/

### 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



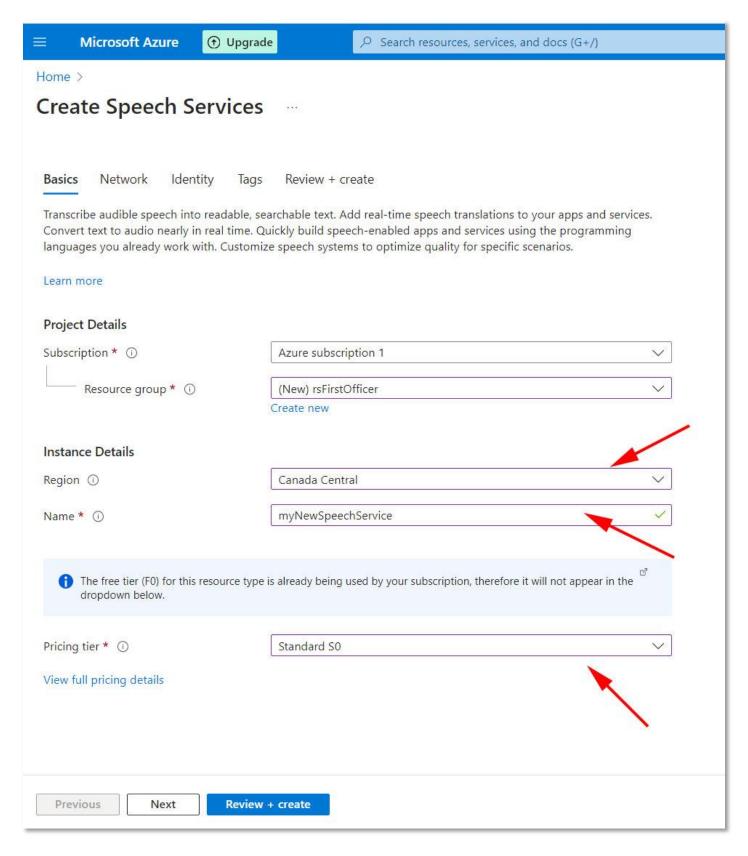
Create a Resource Group with any name you like.

Select your Region from the dropdown list.

Give your Service a name.

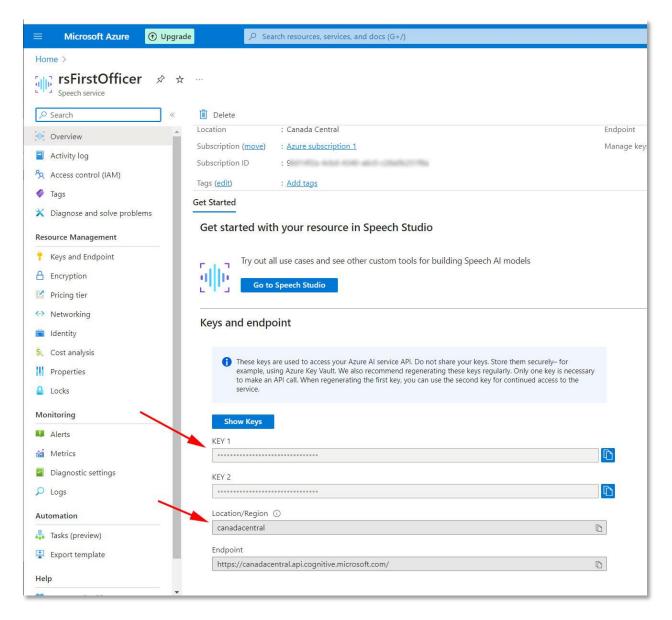
Select F0 Free pricing tier.

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



## Step 3

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



Settings		_		×
Basic Setup Azure Voice	s 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		V	
Pilot Monitoring Voice:	en-US-EmmaNeural		^	
	en-US-BrianNeural			
	en-US-JennyNeural		V	
			Clo	se

That's it you're good to go.