

CREATE & CONFIGURE IBM CLOUD SERVICE

CREATE THE TEXT-TO-SPEECH SERVICE

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Project title	Personal Assistance for seniors who are self-reliant
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TEXT TO SPEECH

The IBM Watson™ Text to Speech service provides APIs that use IBM's speech-synthesis capabilities to synthesize text into natural-sounding speech in a variety of languages, dialects, and voices. The service supports at least one male or female voice, sometimes both, for each language. The audio is streamed back to the client with minimal delay. For speech synthesis, the service supports a synchronous HTTP Representational State Transfer (REST) interface and a WebSocket interface. Both interfaces support plain text and SSML input. SSML is an XML-based markup language that provides text annotation for speech-synthesis applications. The WebSocket interface also supports the SSML <mark> element and word timings.

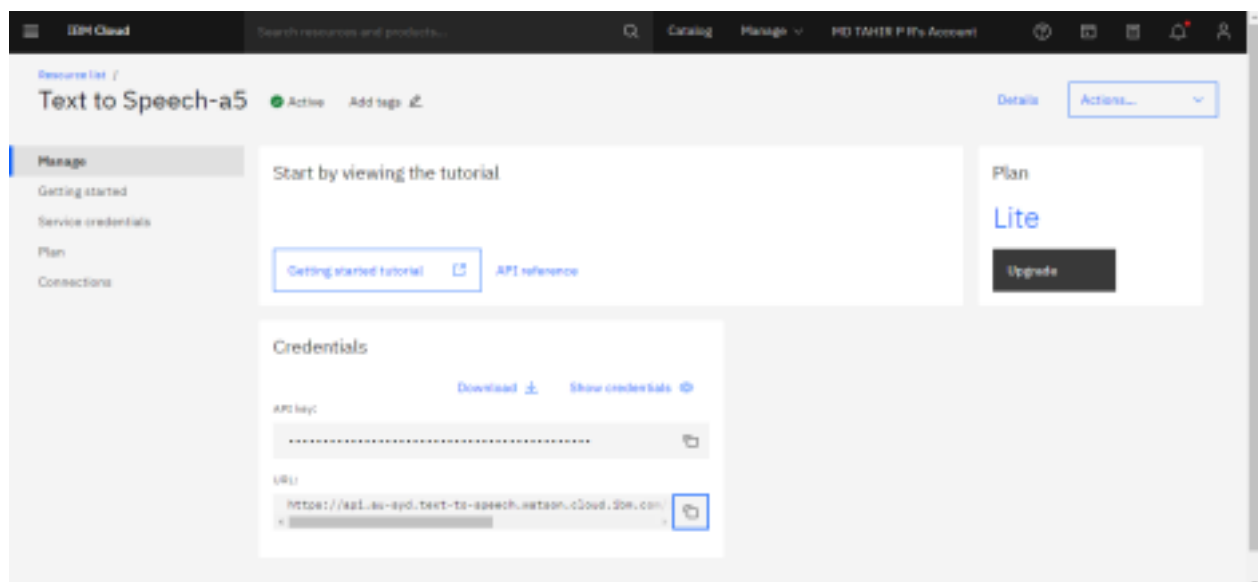
Installation of Watson-TTS Client library Provided for Python:

Code:

```
Pip install -upgrade"ibm-watson">=6.1.0"
```

```
C:\Users\ELCOT>pip install --upgrade "ibm-watson">=6.1.0
Requirement already satisfied: ibm-watson>=6.1.0 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (6.1.0)
Requirement already satisfied: websocket-client==1.1.0 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from ibm-watson>=6.1.0) (1.1.0)
Requirement already satisfied: requests<3.0,>=2.0 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from ibm-watson>=6.1.0) (2.28.1)
Requirement already satisfied: ibm-cloud-sdk-core==3.*,>=3.3.6 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from ibm-watson>=6.1.0) (3.16.0)
Requirement already satisfied: python-dateutil>=2.5.3 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from ibm-watson>=6.1.0) (2.8.2)
Requirement already satisfied: urllib3<2.0.0,>=1.26.0 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from ibm-cloud-sdk-core==3.*,>=3.3.6->ibm-watson>=6.1.0) (1.26.12)
Requirement already satisfied: PyJWT<3.0.0,>=2.4.0 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from ibm-cloud-sdk-core==3.*,>=3.3.6->ibm-watson>=6.1.0) (2.5.0)
Requirement already satisfied: six>=1.5 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from python-dateutil>=2.5.3->ibm-watson>=6.1.0) (1.16.0)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from requests<3.0,>=2.0->ibm-watson>=6.1.0) (2022.9.24)
Requirement already satisfied: idna<4,>=2.5 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from requests<3.0,>=2.0->ibm-watson>=6.1.0) (3.4)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\elcot\appdata\local\programs\python\python310\lib\site-packages (from requests<3.0,>=2.0->ibm-watson>=6.1.0) (2.1.1)
WARNING: You are using pip version 21.2.4; however, version 22.3 is available.
You should consider upgrading via the 'C:\Users\ELCOT\AppData\Local\Programs\Python\Python310\python.exe -m pip install --upgrade pip' command.
```

Service Creation Status & Credential Details:



STATUS : ACTIVE

Execution & Test Run of Program to Access TTS:

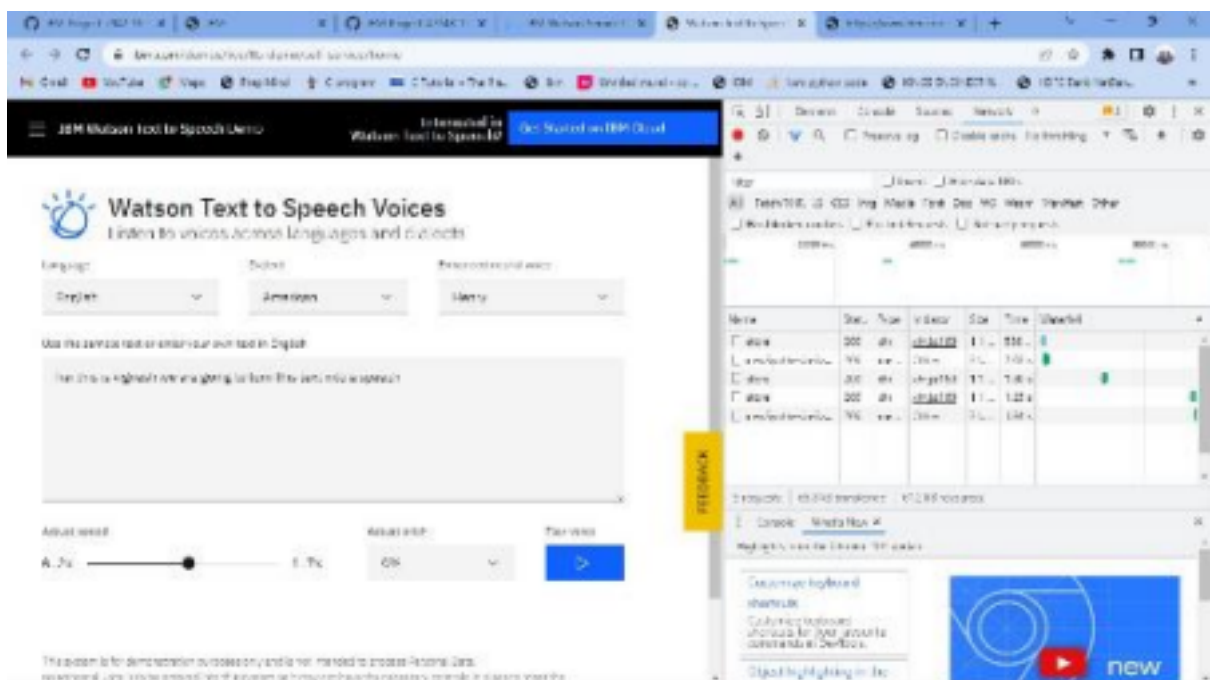
The image shows a Jupyter Notebook with two cells. The first cell contains a Python script that uses the IBM Watson Text to Speech API to synthesize the text "Take Rantac D Now" into an audio file named "hello_world.wav". The script uses the `ibm_watson` and `ibm_cloud_sdk_core` libraries. The second cell shows the output of the script, which is a restart message from the Jupyter environment.

```

from ibm_watson import TextToSpeechV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
authenticator = IAMAuthenticator('2nbbkCOYWGcsaW7gJlOyDSQgUXG6-uuvM')
text_to_speech = TextToSpeechV1(authenticator=authenticator)
text_to_speech.set_service_url('https://api.au-syd.text-to-speech.watson.cloud.ibm.com/instances/2nbbkCOYWGcsaW7gJlOyDSQgUXG6-uuvM')
with open('hello_world.wav', 'wb') as audio_file:
    audio_file.write(
        text_to_speech.synthesize(
            'Take Rantac D Now',
            voice='en-US_AllisonV3Voice',
            accept='audio/wav'
        ).get_result().content)

```

Python 3.10.2 (tags/v3.10.2:a58ebcc, Jan 17 2022, 14:12:15) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
==== RESTART: C:\Users\ELCOT\Desktop\texttospech.py =====



RESULT : SUCCESSFULLY CREATED