

CREATE & CONFIGURE IBM CLOUD SERVICES

CREATE TEXT TO SPEECH SERVICE

Installation of Watson-TTS Client library Provided for Python:

Code:

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

```
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sibis>pip install --upgrade "ibm-watson>=6.1.0"
Requirement already satisfied: ibm-watson>=6.1.0 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (6.1.0)
Requirement already satisfied: ibm-cloud-sdk-core==3.*,>=3.3.6 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from ibm-watson>=6.1.0) (3.16.0)
Requirement already satisfied: requests<3.0,>=2.0 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from ibm-watson>=6.1.0) (2.28.1)
Requirement already satisfied: python-dateutil>=2.5.3 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from ibm-watson>=6.1.0) (2.8.2)
Requirement already satisfied: websocket-client==1.0 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from ibm-watson>=6.1.0) (1.1.0)
Requirement already satisfied: PyJWT<3.0.0,>=2.4.0 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from ibm-cloud-sdk-core==3.*,>=3.3.6->ibm-watson>=6.1.0) (2.6.0)
Requirement already satisfied: urllib3<2.0.0,>=1.26.0 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from ibm-cloud-sdk-core==3.*,>=3.3.6->ibm-watson>=6.1.0) (1.26.12)
Requirement already satisfied: six>=1.5 in c:\users\sibis\appdata\roaming\python\python39\site-packages (from python-dateutil>=2.5.3->ibm-watson>=6.1.0) (1.16.0)
Requirement already satisfied: idna<4,>=2.5 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from requests<3.0,>=2.0->ibm-watson>=6.1.0) (3.4)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from requests<3.0,>=2.0->ibm-watson>=6.1.0) (2022.9.24)
Requirement already satisfied: charset-normalizer<3,>=2 in c:\users\sibis\appdata\local\programs\python\python39\lib\site-packages (from requests<3.0,>=2.0->ibm-watson>=6.1.0) (2.1.1)

C:\Users\sibis>
```

Service Creation Status & Credential Details:

STATUS: ACTIVE

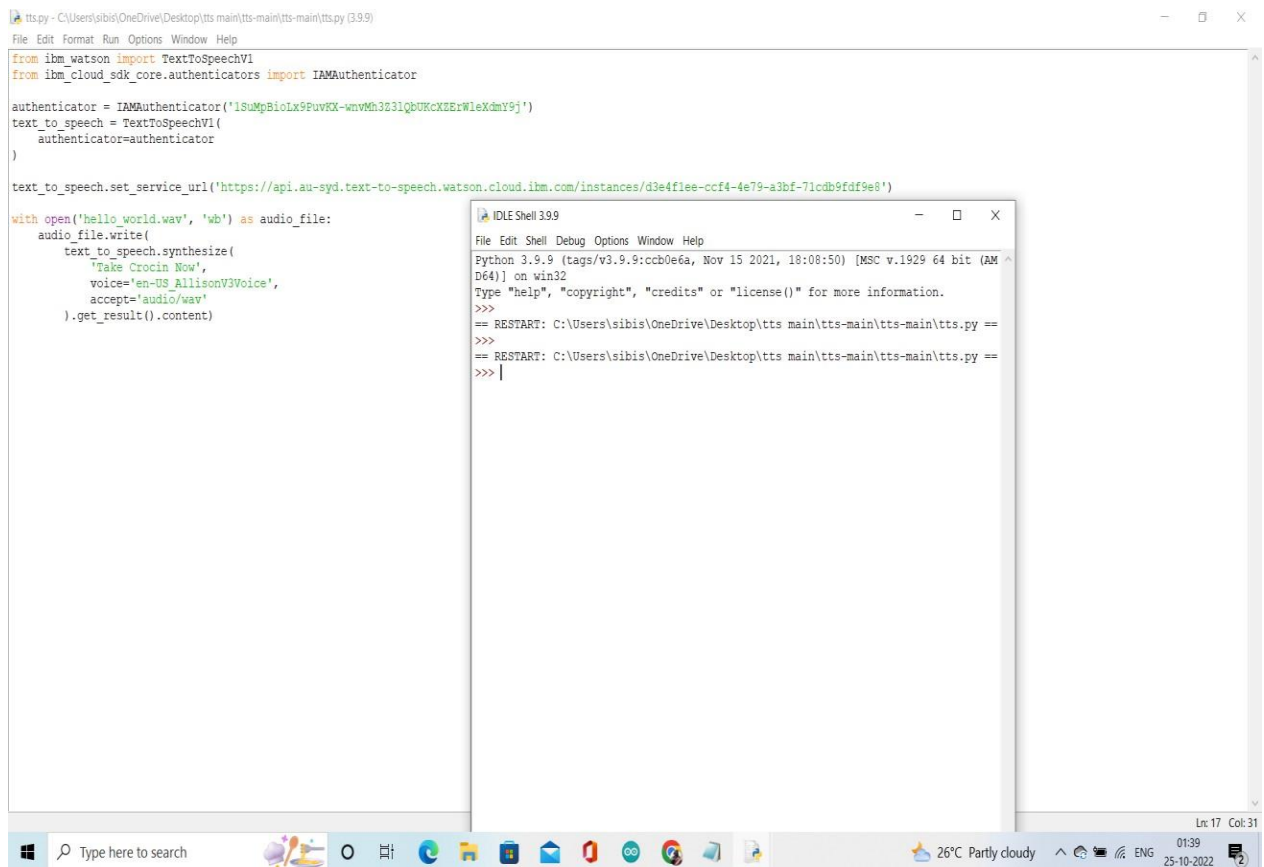
The screenshot shows the IBM Cloud console interface. The top navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and the user's account. The main content area is titled "Text to Speech-ok" and shows a status of "Active". A sidebar on the left contains links for Manage, Getting started, Service credentials, Plan, and Connections. The main panel has a "Start by viewing the tutorial" section with links to "Getting started tutorial" and "API reference". To the right is a "Plan" section with a "Lite" plan selected and an "Upgrade" button. Below this is a "Credentials" section with a "Download" button and a "Show credentials" link. The credentials are displayed as follows:

```
API key:
.....

URL:
https://api.eu-gb.text-to-speech.watson.cloud.ibm.com/instances/27...
```

The bottom of the screen shows a Windows taskbar with various application icons, a search bar, and system tray information including the date and time (12:26, 10-11-2022).

Execution & Test Run of Program to Access TTS:



The screenshot displays a Python IDE with a file named `tts.py` and an integrated IDLE Shell. The Python code in the editor uses the `ibm_watson` and `ibm_cloud_sdk_core` libraries to interact with IBM Watson Text-to-Speech. It defines an `IAMAuthenticator` and a `TextToSpeechV1` instance, sets a service URL, and synthesizes the text "Take Crocin Now" into an audio file named `hello_world.wav`.

```
tts.py - C:\Users\sibis\OneDrive\Desktop\tts main\tts-main\tts-main\tts.py (3.9.9)
File Edit Format Run Options Window Help
from ibm_watson import TextToSpeechV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator

authenticator = IAMAuthenticator('1SuMpBtoLx9Puv6X-wnvMh3Z3lQbUKCXEErWleXdmY9j')
text_to_speech = TextToSpeechV1(
    authenticator=authenticator
)

text_to_speech.set_service_url('https://api.au-syd.text-to-speech.watson.cloud.ibm.com/instances/d3e4f1ee-ccf4-4e79-a3bf-71cdb9fdf9e8')

with open('hello_world.wav', 'wb') as audio_file:
    audio_file.write(
        text_to_speech.synthesize(
            'Take Crocin Now',
            voice='en-US_AllisonV3Voice',
            accept='audio/wav'
        ).get_result().content
    )
```

The IDLE Shell shows the execution of the program, which restarts twice before displaying a prompt:

```
IDLE Shell 3.9.9
File Edit Shell Debug Options Window Help
Python 3.9.9 (tags/v3.9.9:ccb0e6a, Nov 15 2021, 18:08:50) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:\Users\sibis\OneDrive\Desktop\tts main\tts-main\tts-main\tts.py ==
>>>
== RESTART: C:\Users\sibis\OneDrive\Desktop\tts main\tts-main\tts-main\tts.py ==
>>> |
```

The Windows taskbar at the bottom shows the date as 25-10-2022 and the time as 01:39.

RESULT: SUCCESSFULLY CREATED.