

System Integration

Text To Speech Using Microsoft Azure API

The instructions for using the Microsoft Azure text to speech service using the APIs are covered in this documentation. You can use this API for free and can be fully included in your projects.

Text-To-Speech:

Microsoft Azure Text-To-Speech is a cognitive service API which converts text into speech. You can obtain voices with various speaking styles and emotional tones using a personalized, realistic voice generator to suit your needs. You can generate speech with 400 different types of neural voices with different languages, emotions, and variants.

API Reference:

This reference guide explains how to use the available APIs. These APIs use azure cognitive services. We have two endpoints available. Those are:

/availableVoices:

You can use this endpoint to get a full list of voices for a specified region. This is a get request. No need to pass additional parameters. Response is an array of Json objects.

Method: GET

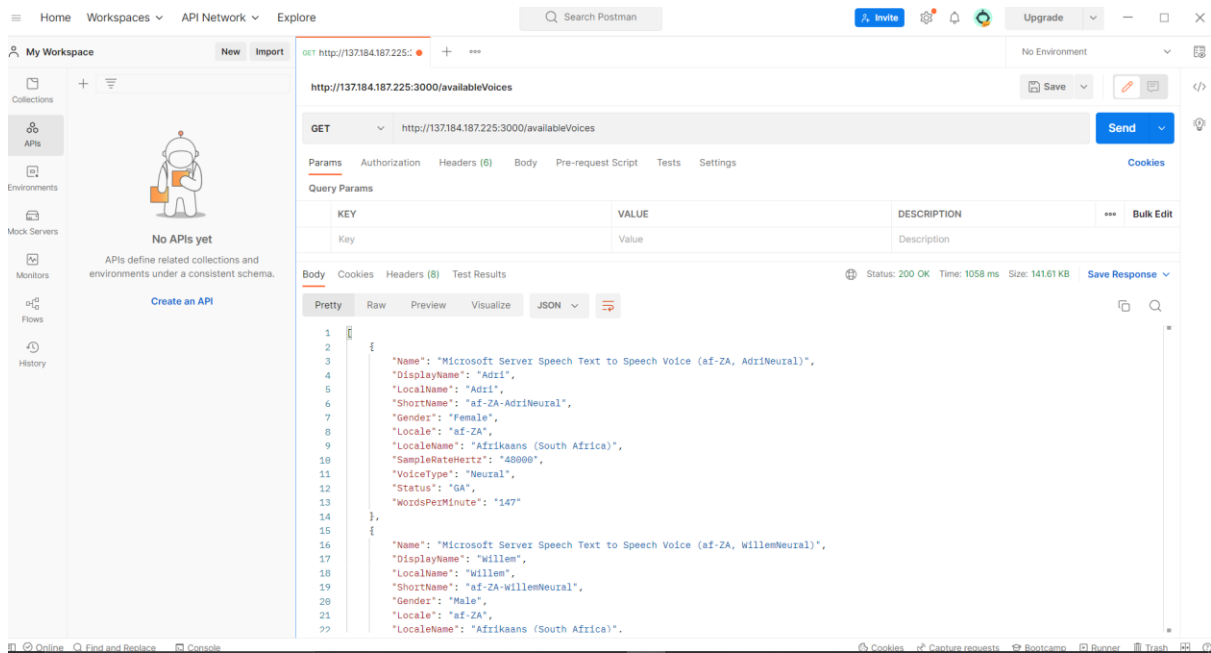
Endpoint: <http://137.184.187.225:3000/availableVoices>

Request:

For this API there is no need to pass additional parameters.

Response:

```
[
  {
    "Name": "Microsoft Server Speech Text to Speech Voice
    (af-ZA, AdriNeural)",
    "DisplayName": "Adri",
    "LocalName": "Adri",
    "ShortName": "af-ZA-AdriNeural",
    "Gender": "Female",
    "Locale": "af-ZA",
    "LocaleName": "Afrikaans (South Africa)",
    "SampleRateHertz": "48000",
    "VoiceType": "Neural",
    "Status": "GA",
    "WordsPerMinute": "147"
  },
  {
    "Name": "Microsoft Server Speech Text to Speech Voice
    (af-ZA, WillemNeural)",
    "DisplayName": "Willem",
    "LocalName": "Willem",
    "ShortName": "af-ZA-WillemNeural",
    "Gender": "Male",
    "Locale": "af-ZA",
    "LocaleName": "Afrikaans (South Africa)",
    "SampleRateHertz": "48000",
    "VoiceType": "Neural",
    "Status": "GA",
    "WordsPerMinute": "155"
  },
  ...
]
```



/convert:

This endpoint will allow you to convert text to speech using the Speech Synthesis Markup Language (SSML). For this API you need to pass the text body parameter and it is required. You can pass optional body parameters like expression to the speech like caring, sad, angry etc. and you can also add volume to the speech like loud, silent or you can pass absolute, relative values to the sound. For more information on what expression and volume options you can visit the official documentation of Microsoft cognitive services:

<https://learn.microsoft.com/en-us/azure/cognitive-services/speech-service/speech-synthesis-markup-voice>

If no optional parameters are passed expression and volume will be set to default values which are calm and soft respectively.

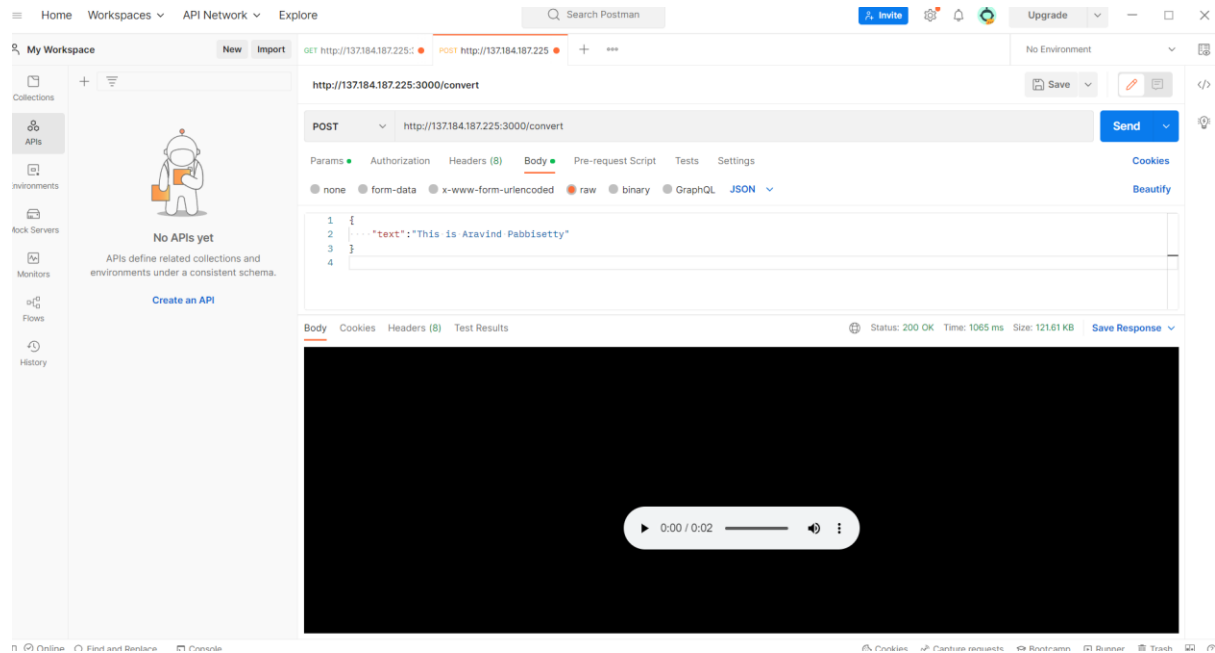
Method: POST

Endpoint: <http://137.184.187.225:3000/convert>

Request: (with no optional parameters)

```
{  
  "text": "This is Aravind Pabbisetty"  
}
```

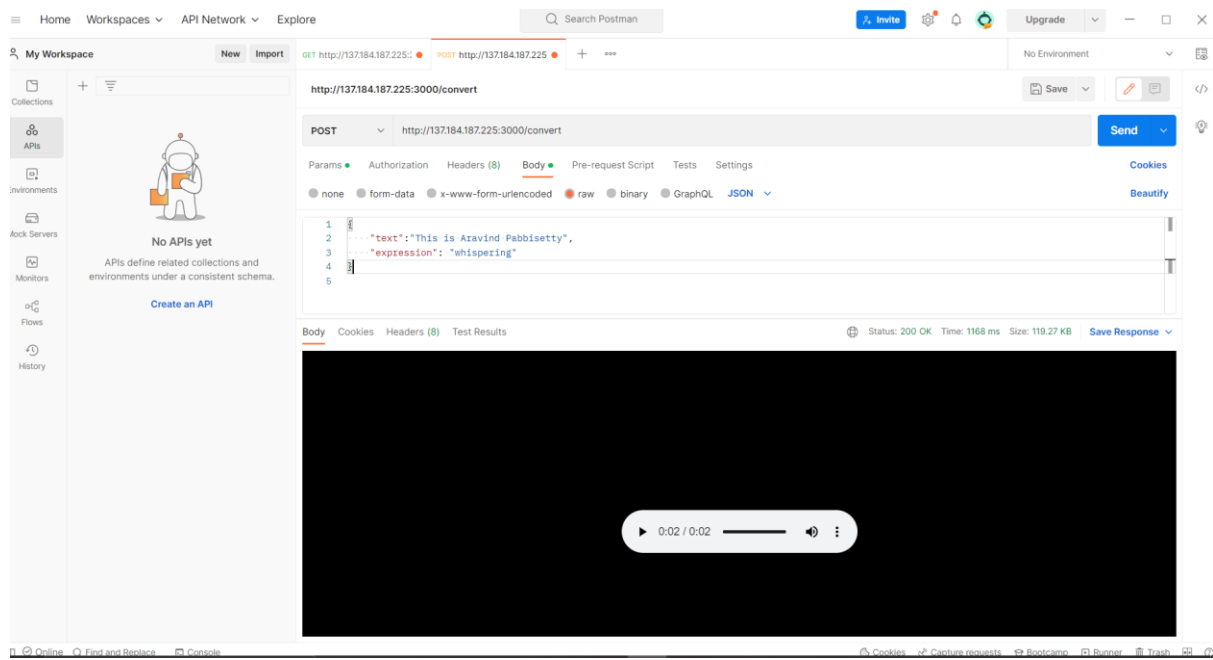
Response:



Request: (with expression parameter)

```
{  
  "text": "This is Aravind Pabbisetty",  
  "expression": "whispering"  
}
```

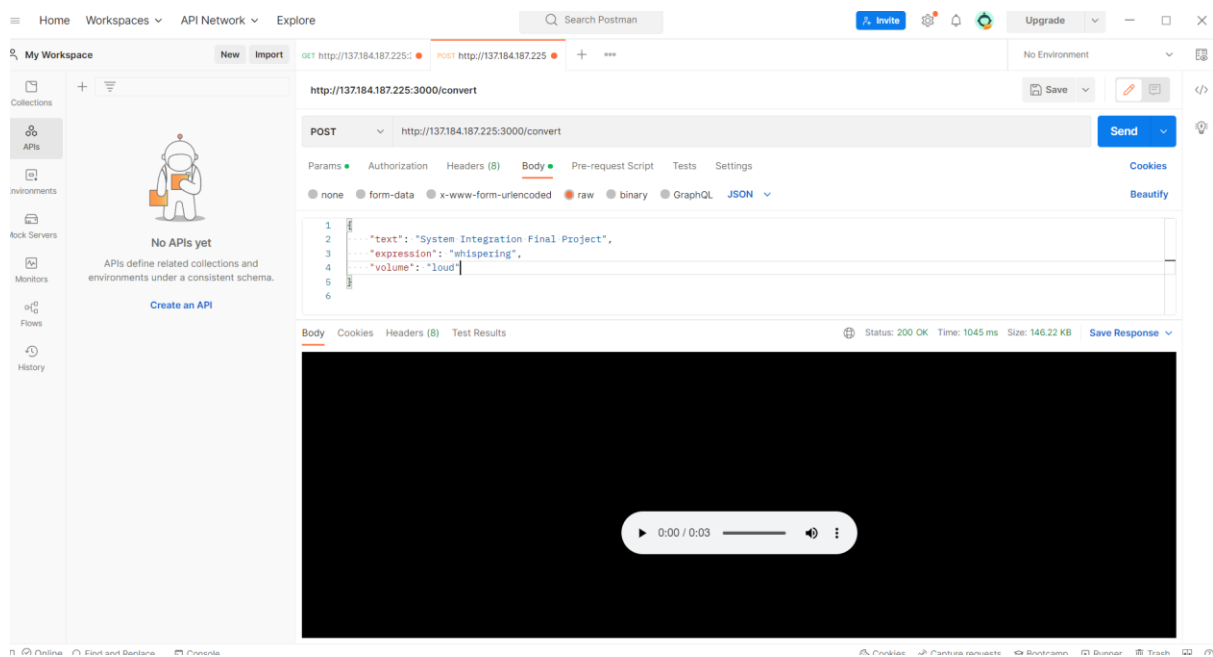
Response:



Request: (with expression and volume parameter)

```
{  
  "text": "System Integration Final Project",  
  "expression": "whispering",  
  "volume": "loud"  
}
```

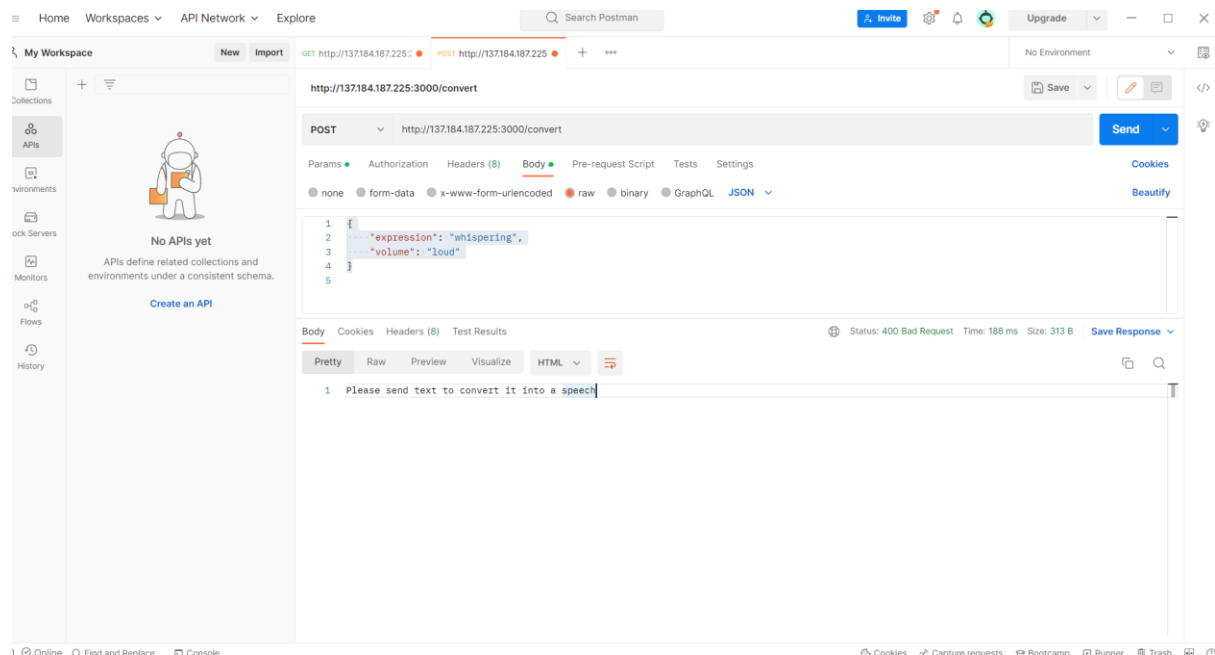
Response:



Request: (With no text)

```
{  
  "expression": "whispering",  
  "volume": "loud"  
}
```

Response: if no text is passed then the api returns a bad request with message to send text.



HTTP status codes:

<u>Status</u>	<u>Description</u>	<u>Possible Reason</u>
200	Ok	The request was successful, and the response is the audio file.
400	Bad Request	A required parameter might be missing, or a header value is wrong.
401	Unauthorized	Access key might be wrong, or token is expired

For more information on azure text-to-speech you can visit

<https://learn.microsoft.com/en-us/azure/cognitive-services/speech-service/rest-text-to-speech?tabs=streaming>

For more information on these APIs, you can visit the endpoint

<http://137.184.187.225:3000/apidocs/> . You can play with those APIs at that endpoint.