AI & Machine Learning Products   (https://cloud.google.com/products/machine-learning/)
Cloud Speech-to-Text   (https://cloud.google.com/speech-to-text/)
Documentation (https://cloud.google.com/speech-to-text/docs/) Guides

Quickstart: Using the command line

This page shows you how to send a speech recognition request to Speech-to-Text using the REST interface (https://cloud.google.com/speech-to-text/docs/reference/rest) and the `curl` command.

Speech-to-Text enables easy integration of Google speech recognition technologies into developer applications. You can send audio data to the Speech-to-Text API, which then returns a text transcription of that audio file. For more information about the service, see Cloud Speech-to-Text basics (https://cloud.google.com/speech-to-text/docs/basics).

Before you begin

1. Sign in (https://accounts.google.com/Login) to your Google Account.

   If you don't already have one, sign up for a new account (https://accounts.google.com/SignUp).

2. Set up a Cloud Console project.

   SET UP A PROJECT

   Click to:
   - Create or select a project.
   - Enable the Cloud Speech-to-Text API for that project.
   - Create a service account.
   - Download a private key as JSON.

   You can view and manage these resources at any time in the Cloud Console (https://console.cloud.google.com/).

3. Set the environment variable *GOOGLE_APPLICATION_CREDENTIALS* to the file path of the JSON file that contains your service account key. This variable only applies to your current shell session, so if you open a new session, set the variable again.

   ⌄   **Example:** Linux or macOS

   Replace *[PATH]* with the file path of the JSON file that contains your service account key.

```
export GOOGLE_APPLICATION_CREDENTIALS="[PATH]"
```

For example:

```
export GOOGLE_APPLICATION_CREDENTIALS="/home/user/Downloads/service-account-fil
```

⌄ **Example:** Windows

Replace *[PATH]* with the file path of the JSON file that contains your service account key, and *[FILE_NAME]* with the filename.

With PowerShell:

```
$env:GOOGLE_APPLICATION_CREDENTIALS="[PATH]"
```

For example:

```
$env:GOOGLE_APPLICATION_CREDENTIALS="C:\Users\username\Downloads\[FILE_NAME].js
```

With command prompt:

```
set GOOGLE_APPLICATION_CREDENTIALS=[PATH]
```

4. Install and initialize the Cloud SDK (https://cloud.google.com/sdk/docs/).

Make an audio transcription request

Now you can use Cloud Speech-to-Text to transcribe an audio file to text. Use the following code sample to send a **recognize** (https://cloud.google.com/speech-to-text/docs/reference/rest/v1/speech/recognize) REST request to the Speech-to-Text API.

1. Create a JSON request file with the following text, and save it as a `sync-request.json` plain text file:

```
{
  "config": {
      "encoding":"FLAC",
      "sampleRateHertz": 16000,
```

```
        "languageCode": "en-US",
        "enableWordTimeOffsets": false
    },
    "audio": {
        "uri":"gs://cloud-samples-tests/speech/brooklyn.flac"
    }
}
```

This JSON snippet indicates that the audio file has a FLAC encoding format, a sample
rate of 16000 Hz, and that the audio file is stored on Google Cloud Storage at the given
URI. The audio file is publicly accessible, so you don't need authentication credentials to
access the file.

2. Use `curl` to make a `speech:recognize` request, passing it the filename of the JSON
   request you set up in step 1:

⭐ The sample `curl` command uses the `gcloud auth application-default print-access-token`
command to get an authentication token.

```
curl -s -H "Content-Type: application/json" \
    -H "Authorization: Bearer "$(gcloud auth application-default print-access-t
    https://speech.googleapis.com/v1/speech:recognize \
    -d @sync-request.json
```

⭐ Note that to pass a filename to `curl` you use the `-d` option (for "data") and precede the filename with
an `@` sign. This file should be in the same directory in which you execute the `curl` command.

You should see a response similar to the following:

```
{
  "results": [
    {
      "alternatives": [
        {
          "transcript": "how old is the Brooklyn Bridge",
          "confidence": 0.98267895
        }
      ]
    }
```

```
    ]
}
```

Congratulations! You've sent your first request to Cloud Speech-to-Text.

If you receive an error or an empty response from Cloud Speech-to-Text, take a look at the troubleshooting (https://cloud.google.com/speech-to-text/docs/troubleshooting) and error mitigation (https://cloud.google.com/speech-to-text/docs/error-messages) steps.

What's next

- Practice transcribing short audio files (https://cloud.google.com/speech-to-text/docs/sync-recognize).

- Learn how to batch long audio files for speech recognition (https://cloud.google.com/speech-to-text/docs/async-recognize).

- Learn how to transcribe streaming audio (https://cloud.google.com/speech-to-text/docs/streaming-recognize) like from a microphone.

- Get started with the Cloud Speech-to-Text in your language of choice by using a Cloud Speech-to-Text client library (https://cloud.google.com/speech-to-text/docs/reference/libraries).

- Work through the sample applications (https://cloud.google.com/speech-to-text/docs/samples).

- For best performance, accuracy, and other tips, see the best practices (https://cloud.google.com/speech-to-text/docs/best-practices) documentation.