Quickstart: Using the command line

This quickstart introduces you to Text-to-Speech. In this quickstart, you set up your Google Cloud Platform project and authorization and then make a request for Text-to-Speech to create audio from text.

To learn more about the fundamental concepts in Text-to-Speech, read Text-to-Speech Basics (https://cloud.google.com/text-to-speech/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. In the Cloud Console, on the project selector page, select or create a Cloud project.

★ **Note**: If you don't plan to keep the resources that you create in this procedure, create a project instead of selecting an existing project. After you finish these steps, you can delete the project, removing all resources associated with the project.

GO TO THE PROJECT SELECTOR PAGE (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/PROJECTSELECT

3. Make sure that billing is enabled for your Google Cloud project. Learn how to confirm billing is enabled for your project (https://cloud.google.com/billing/docs/how-to/modify-project).
4. Enable the Cloud Text-to-Speech API.

   ENABLE THE API (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/FLOWS/ENABLEAPI?APIID=TEXTTOSPE

5. Set up authentication:

   a. In the Cloud Console, go to the **Create service account key** page.

   GO TO THE CREATE SERVICE ACCOUNT KEY PAGE (HTTPS://CONSOLE.CLOUD.GOOGLE.COM/

b. From the **Service account** list, select **New service account**.

c. In the **Service account name** field, enter a name.

d. Don't select a value from the **Role** list. No role is required to access this service.

e. Click **Create**. A note appears, warning that this service account has no role.

f. Click **Create without role**. A JSON file that contains your key downloads to your computer.

6. Set the environment variable ***GOOGLE_APPLICATION_CREDENTIALS*** to the 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 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 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]
```

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

Synthesize audio from text

You can convert text to audio by making an HTTP POST request to the `https://texttospeech.googleapis.com/v1/text:synthesize` endpoint. In the body of your POST command, specify the type of voice to synthesize in the `voice` configuration section, specify the text to synthesize in the `text` field of the `input` section, and specify the type of audio to create in the `audioConfig` section.

1. Execute the REST request below at the command line to synthesize audio from text using Text-to-Speech. The command uses the `gcloud auth application-default print-access-token` command to retrieve an authorization token for the request.

   HTTP method and URL:

   ```
   POST https://texttospeech.googleapis.com/v1/text:synthesize
   ```

   Request JSON body:

   ```
   {
     "input":{
       "text":"Android is a mobile operating system developed by Google, based on
     },
     "voice":{
       "languageCode":"en-gb",
       "name":"en-GB-Standard-A",
       "ssmlGender":"FEMALE"
     },
     "audioConfig":{
       "audioEncoding":"MP3"
     }
   }
   ```

   To send your request, expand one of these options:

   curl (Linux, macOS, or Cloud Shell)

   Note: If you are not executing the command below from Cloud Shell (https://cloud.google.com/shell/docs) or Compute Engine (https://cloud.google.com/compute/docs), ensure you have set the _____

(https://cloud.google.com/docs/authentication/production) environment variable to your service account private key file path.

Save the request body in a file called **request.json**, and execute the following command:

```
curl -X POST \
-H "Authorization: Bearer "$(gcloud auth application-default print-access-token
-H "Content-Type: application/json; charset=utf-8" \
-d @request.json \
https://texttospeech.googleapis.com/v1/text:synthesize
```

PowerShell (Windows)

★ **Note:** If you are not executing the command below from Cloud Shell (https://cloud.google.com/shell/docs) or Compute Engine (https://cloud.google.com/compute/docs), ensure you have set the _____ (https://cloud.google.com/docs/authentication/production) environment variable to your service account private key file path.

Save the request body in a file called **request.json**, and execute the following command:

```
$cred = gcloud auth application-default print-access-token
$headers = @{ "Authorization" = "Bearer $cred" }

Invoke-WebRequest `
  -Method POST `
  -Headers $headers `
  -ContentType: "application/json; charset=utf-8" `
  -InFile request.json `
  -Uri "https://texttospeech.googleapis.com/v1/text:synthesize" | Select-Object
```

You should receive a JSON response similar to the following:

```
{
  "audioContent": "//NExAASCCIIAAhEAGAAEMW4kAYPnwwIKw/BBTpwTvB+IAxIfghUfW.."
}
```

2. The JSON output for the REST command contains the synthesized audio in base64-encoded format. Copy the contents of the **audioContent** field into a new file named

`synthesize-output-base64.txt`. Your new file will look something like the following:

```
//NExAARqoIIAAhEuWAAAGNmBGMY4EBcxvABAXBPmPIAF//yAuh9Tn5CEap3/o
...
VVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVVV
```

3. Decode the contents of the `synthesize-output-base64.txt` file into a new file named `synthesized-audio.mp3`. For information on decoding base64, see Decoding Base64-Encoded Audio Content (https://cloud.google.com/text-to-speech/docs/base64-decoding).

```
base64 synthesize-output-base64.txt --decode > synthesized-audio.mp3
```

4. Play the contents of `synthesized-audio.mp3` in an audio application or on an audio device. You can also open the `synthesized-audio.mp3` in the Chrome browser to play the audio by navigating to the folder that contains the file, for example `file://my_file_path/synthesized-audio.mp3`

Clean up

To avoid unnecessary Google Cloud Platform charges, use the Cloud Console (https://console.cloud.google.com/) to delete your project if you do not need it.

What's next

- Learn more about Cloud Text-to-Speech by reading the basics (https://cloud.google.com/text-to-speech/docs/basics).
- Review the list of available voices (https://cloud.google.com/text-to-speech/docs/voices) you can use for synthetic speech.