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Base64 encoding audio content

This page describes how to convert audio from a binary file to base64-encoded data.

When passing audio to the Speech API, you can either pass the URI of a file located on Google Cloud Storage, or you can embed audio data directly within the request's `content` field.

Embedding base64 encoded audio

Audio data is binary data. Within a gRPC request, you can simply write the binary data out directly; however, JSON is used when making a REST request. JSON is a text format that does not directly support binary data, so you will need to convert such binary data into text using [Base64](https://en.wikipedia.org/wiki/Base64) (https://en.wikipedia.org/wiki/Base64) encoding.

To base64 encode an audio file:

LINUX

MAC OSX

WINDOWS

1. Encode the audio file using the base64 command line tool, making sure to prevent line-wrapping by using the `-w 0` flag:

```
$ base64 source_audio_file -w 0 > dest_audio_file
```

2. Create a JSON request file, inlining the base64-encoded audio within the request's `content` field:

```
{
  "config": {
    "encoding": "FLAC",
    "sampleRateHertz": 16000,
    "languageCode": "en-US"
  },
  "audio": {
    "content": "ZkxhQwAAACIQABAAAAUJABtAA+gA8AB+W8FZndQvQAYjv..."
  }
}
```

Embedding audio content programmatically

Embedding audio binary data into requests through text editors is neither desirable or practical. In practice, you will be embedding base64 encoded files within client code. All supported programming languages have built-in mechanisms for base64-encoding content:

PYTHON

NODE.JS

JAVA

In Python, base64 encode audio files as follows:

```
# Import the base64 encoding library.
import base64

# Pass the audio data to an encoding function.
def encode_audio(audio):
    audio_content = audio.read()
    return base64.b64encode(audio_content)
```



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