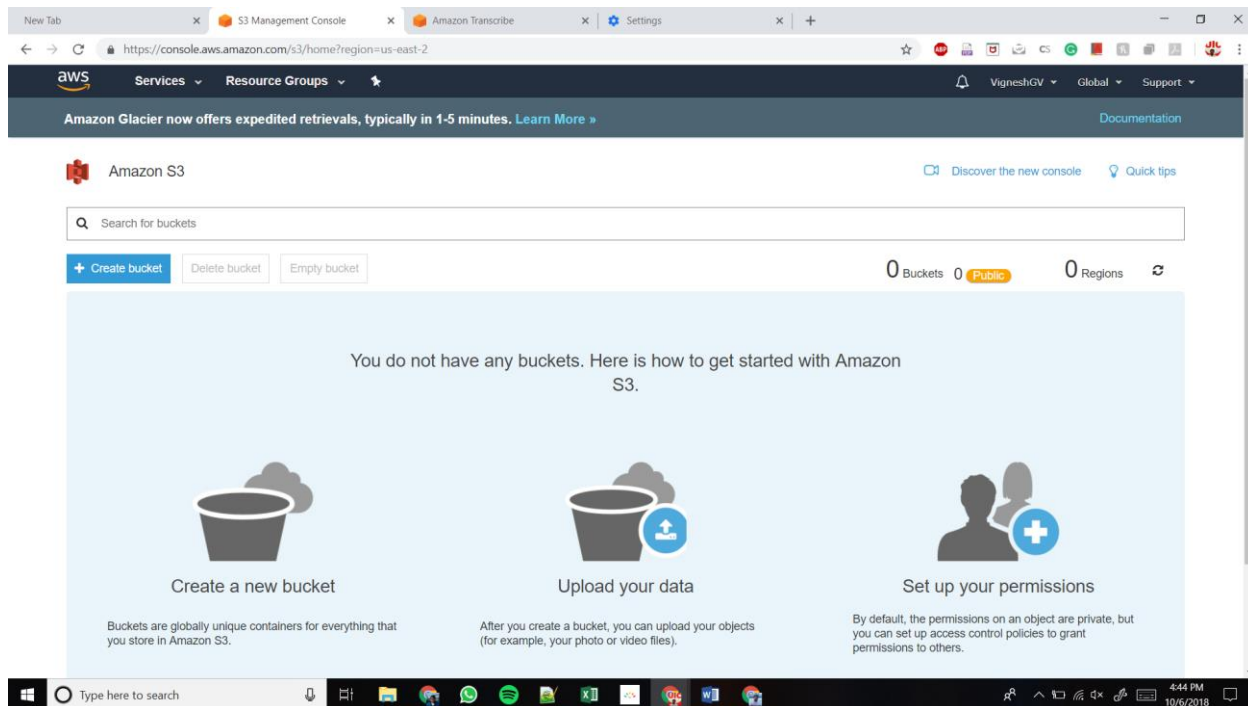


AWS – Amazon Transcribe Speech to Text Conversion

This artifact is a walkthrough for Amazon Transcribe. This will be a new learning for people who have not use cloud storage systems like Google Big Table, Amazon S3, etc. To begin using any of the AWS services, we need to store the data we need to use in any of the AWS services. For instance, in our case to convert or audio file into text, initially we need to store the audio file in Amazon's scalable storage in the cloud service called Amazon S3. Initially we must create an AWS account and then follow the steps given below:

Step-1: Creating a storage bucket in Amazon S3

The S3 interface looks like this:



- Click on Create bucket button.
- Give a bucket name in lower case
- You should specify a region for your bucket (Sometimes Amazon Transcribe will ask you to change the bucket zone – In that case delete the bucket that you have created in a different zone, and create a new bucket in the specific zone that Transcribe is asking you to create)
- To begin with, let's keep all other settings to default and click Next in each window and finally click on Create Bucket Button

Amazon S3 Management Console

Search for buckets

+ Create bucket Delete bucket Empty bucket

1 Buckets 0 Public 1 Regions

Bucket name	Access	Region	Date created
ids594lbmwatsonweek6oct4	Not public *	US East (Ohio)	Oct 6, 2018 4:46:43 PM GMT-0500

* Objects might still be publicly accessible due to object ACLs. [Learn more](#)

Feedback English (US)

© 2008 - 2018, Amazon Web Services, Inc. or its affiliates. All rights reserved. Privacy Policy Terms of Use

4:46 PM 10/6/2018

Amazon S3 Management Console

Create bucket

1 Name and region 2 Configure options 3 Set permissions 4 Review

Properties

Versioning

☐ Keep all versions of an object in the same bucket. [Learn more](#)

Server access logging

☐ Log requests for access to your bucket. [Learn more](#)

Tags

You can use tags to track project costs. [Learn more](#)

Key Value

+ Add another

Object-level logging

☐ Record object-level API activity using AWS CloudTrail for an additional cost. See [CloudTrail pricing](#) or [learn more](#)

Default encryption

☐ Automatically encrypt objects when they are stored in S3. [Learn more](#)

Previous Next

Create a new bucket

Buckets are globally unique containers for everything that you store in Amazon S3.

The screenshot shows the AWS Management Console with the 'Create bucket' wizard open. The wizard is in the 'Set permissions' step (step 3 of 4). The background shows the 'Amazon S3' page with a search bar and buttons for 'Create bucket', 'Delete bucket', and 'Empty bucket'. The wizard has four steps: 1. Name and region, 2. Configure options, 3. Set permissions, and 4. Review.

Create bucket

Manage users

User ID	Objects	Object permissions
vgiriv2(Owner)	<input checked="" type="checkbox"/> Read <input checked="" type="checkbox"/> Write	<input checked="" type="checkbox"/> Read <input checked="" type="checkbox"/> Write

Access for other AWS account [+ Add account](#)

Manage public permissions

Do not grant public read access to this bucket (Recommended)

Manage system permissions

Do not grant Amazon S3 Log Delivery group write access to this bucket

[Previous](#) [Next](#)

The screenshot shows the AWS Management Console with the 'Create bucket' wizard open. The wizard is in the 'Review' step (step 4 of 4). The background shows the 'Amazon S3' page with a search bar and buttons for 'Create bucket', 'Delete bucket', and 'Empty bucket'. The wizard has four steps: 1. Name and region, 2. Configure options, 3. Set permissions, and 4. Review.

Create bucket

Name and region [Edit](#)

Bucket name `ids594ibmwatsonweek6oct4` Region `US East (Ohio)`

Options [Edit](#)

Option	Value
Versioning	Disabled
Server access logging	Disabled
Tagging	0 Tags
Object-level logging	Disabled
Default encryption	None
CloudWatch request metrics	Disabled

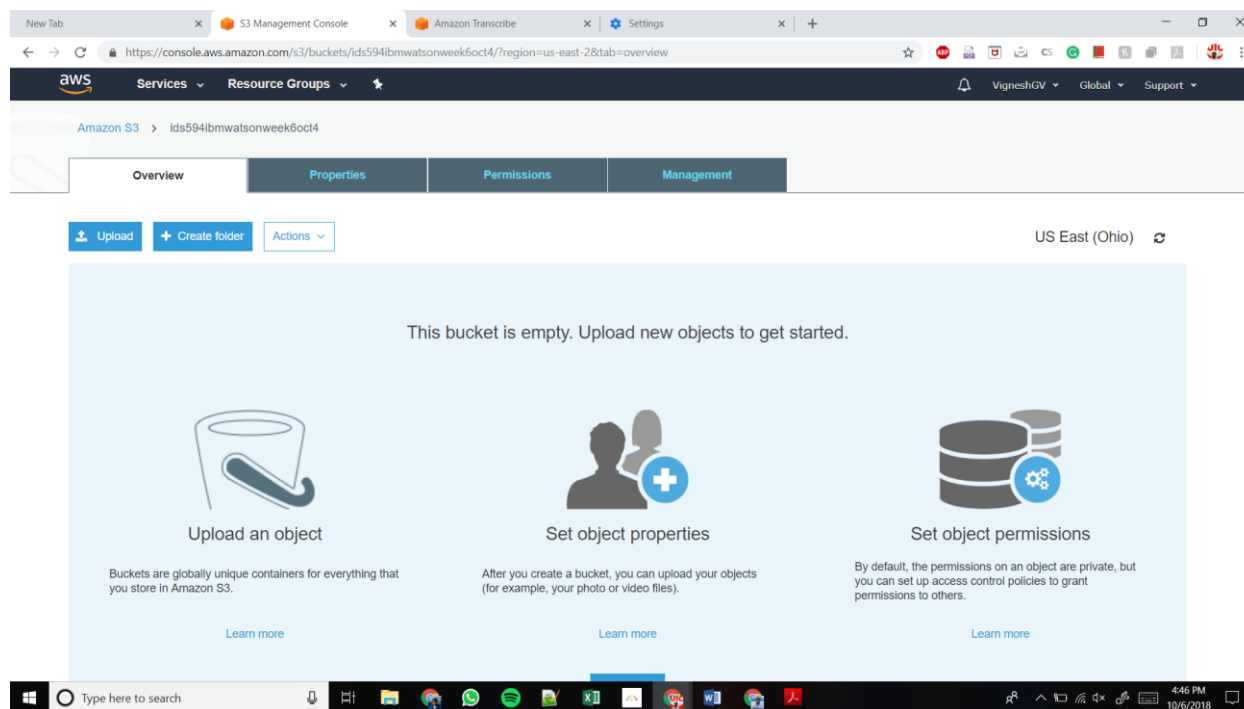
Permissions [Edit](#)

Permission	Value
Users	1
Public permissions	Disabled
System permissions	Disabled

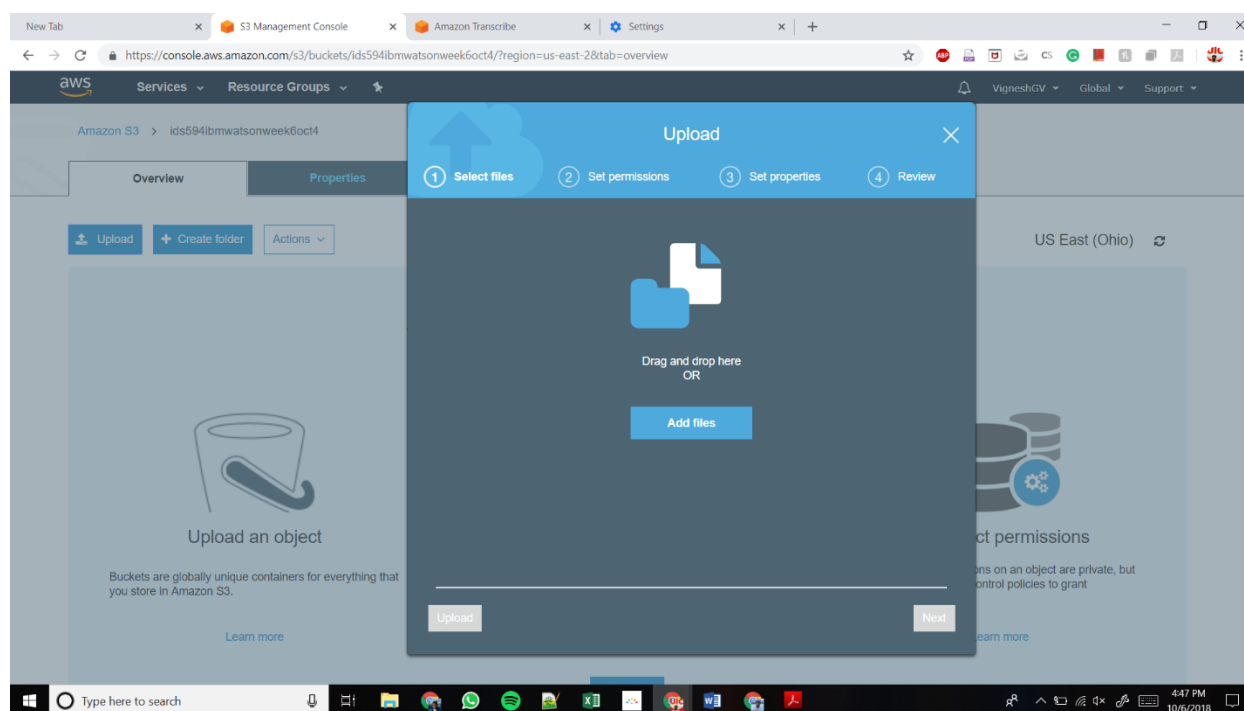
[Previous](#) [Create bucket](#)

Step-2: Uploading audio file (mp3, mp4) in the bucket

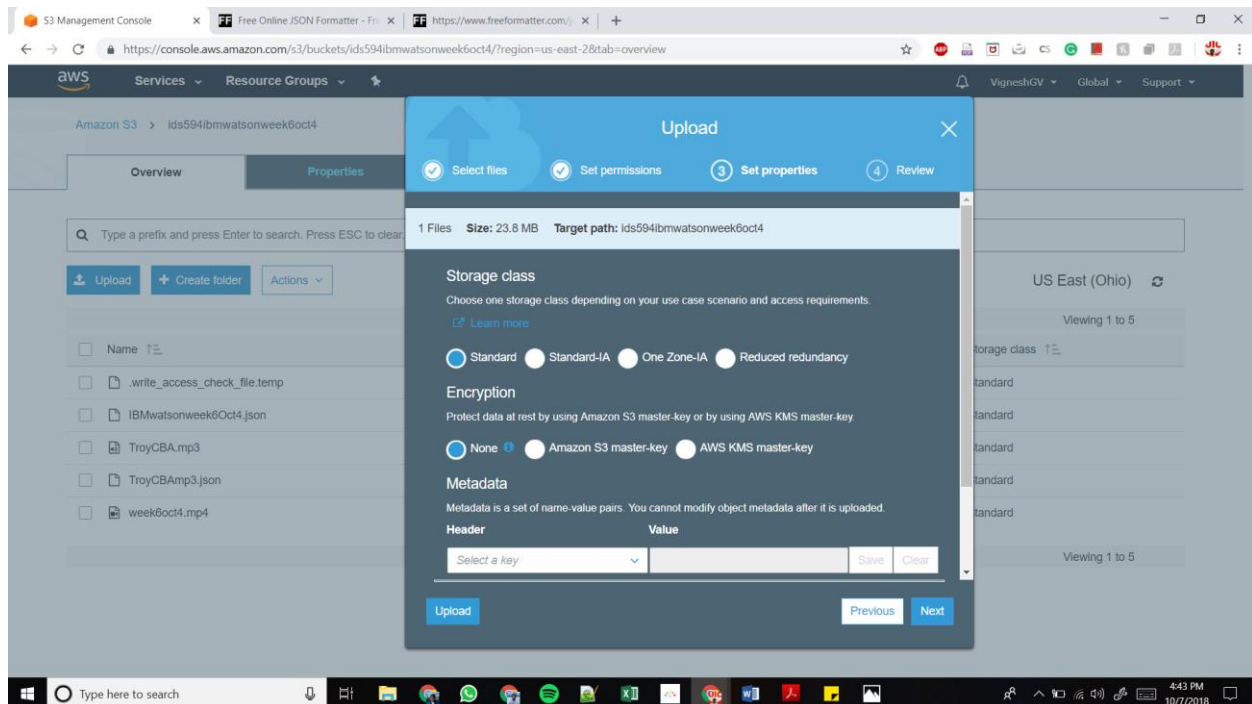
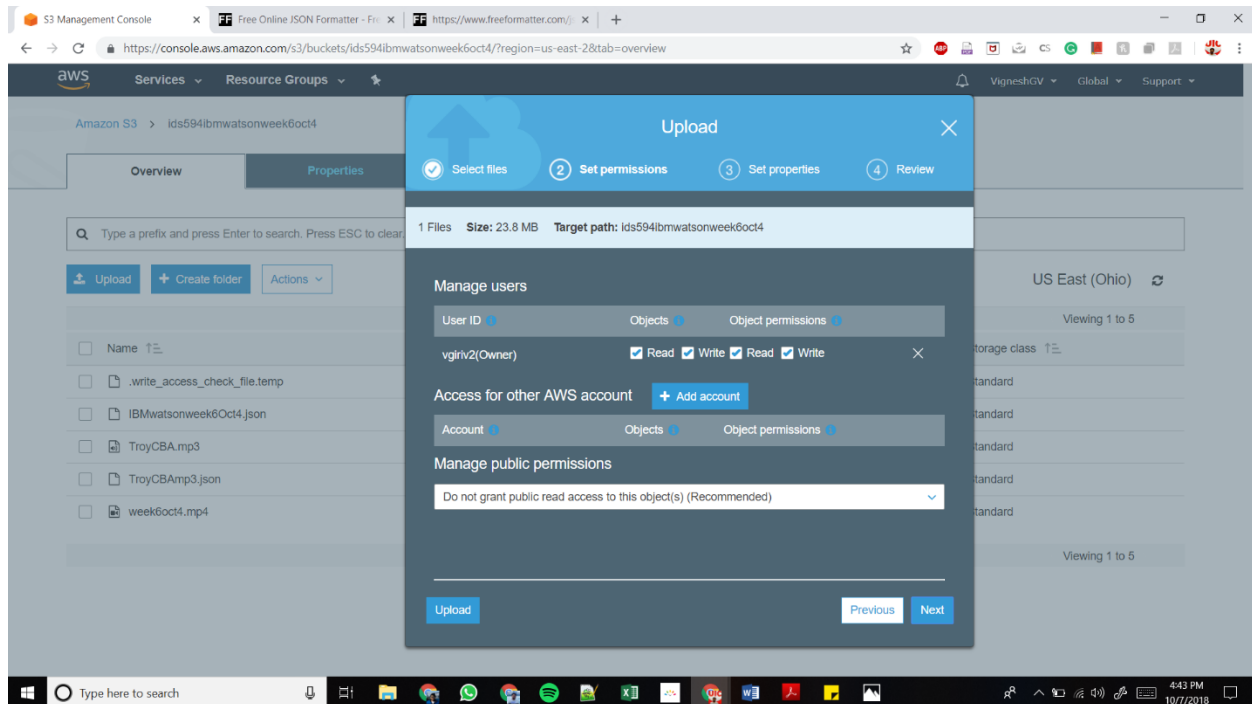
- After the bucket gets created, click on the bucket name.

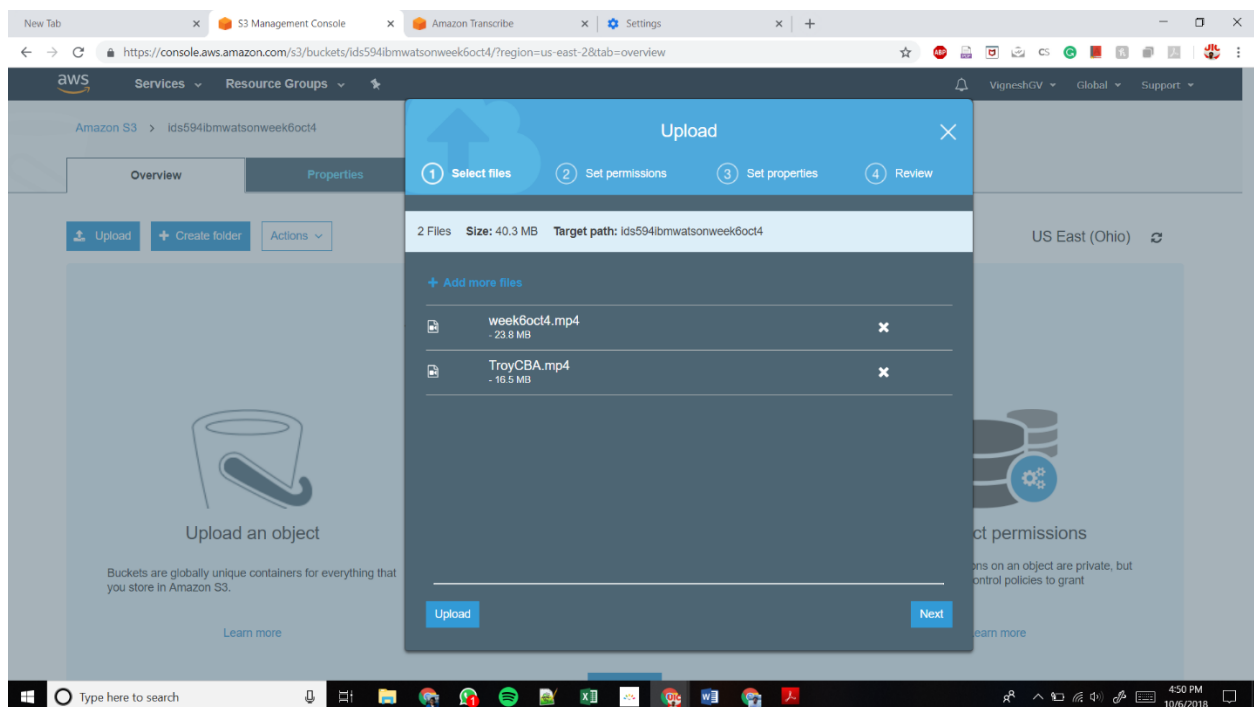
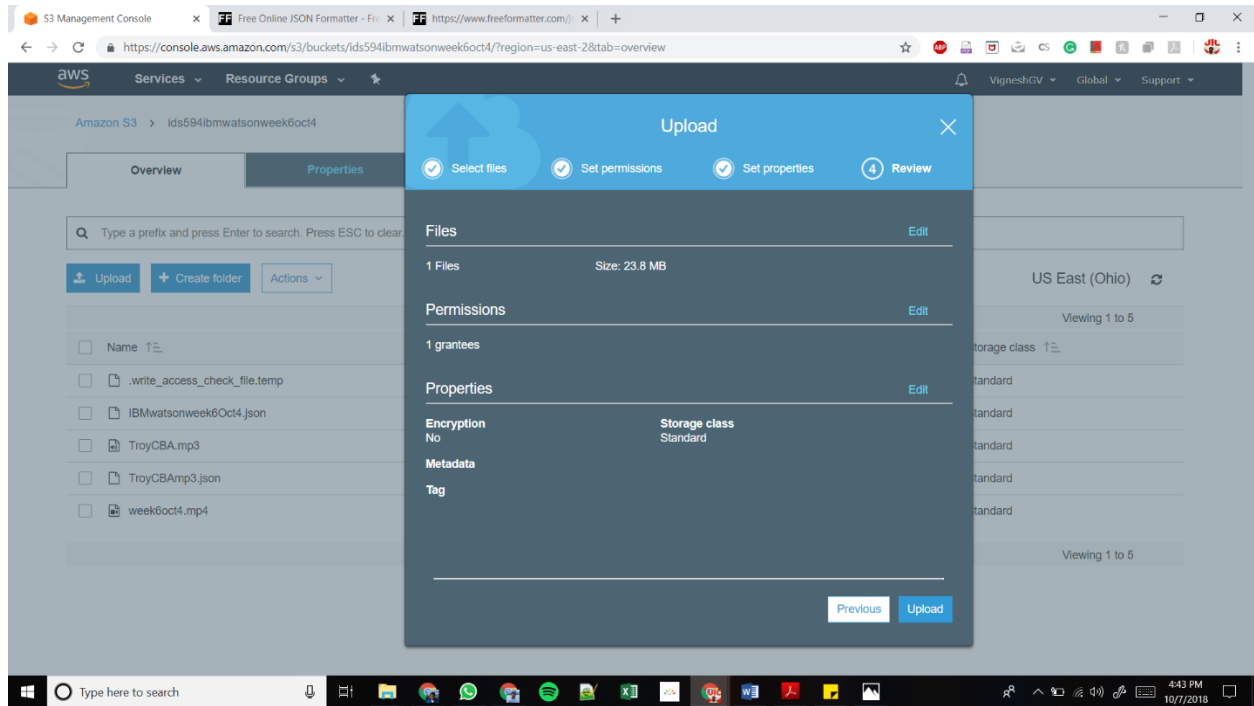


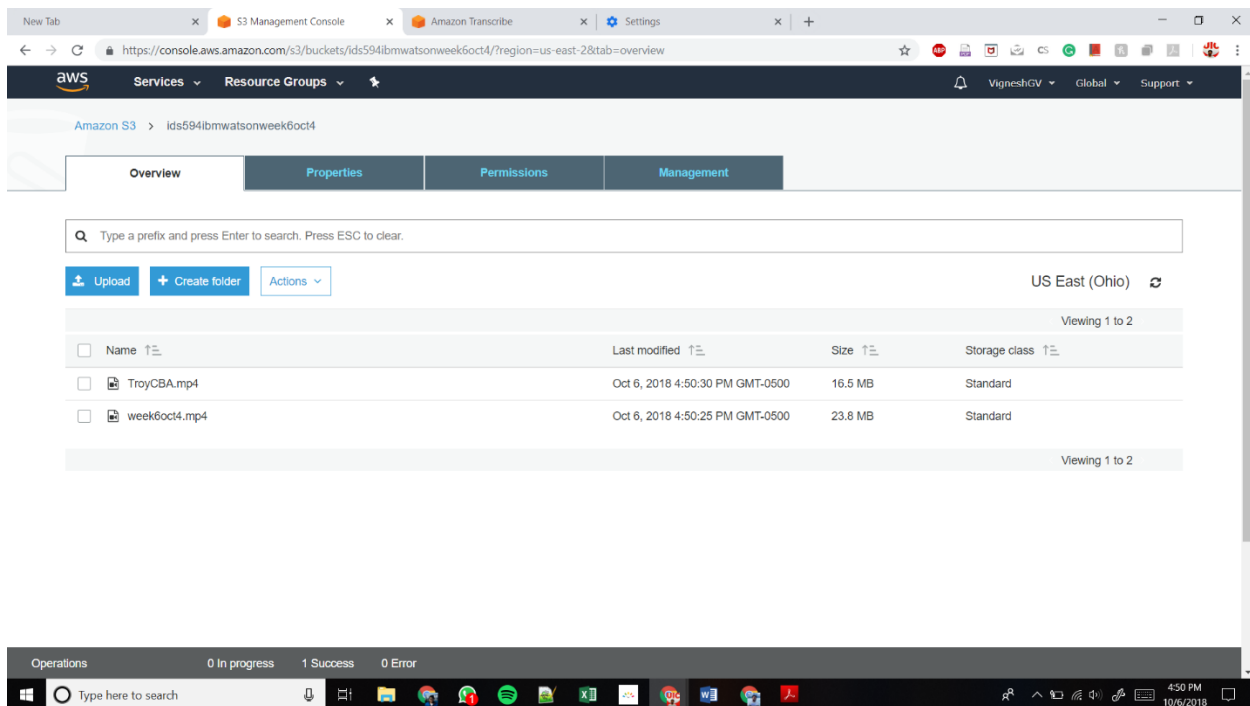
- Upload the audio file(s) that needs to be converted to text.



- Proceed through the next steps without changing any parameters if you are not sure about the set permissions and set properties options and finally click on the upload button.

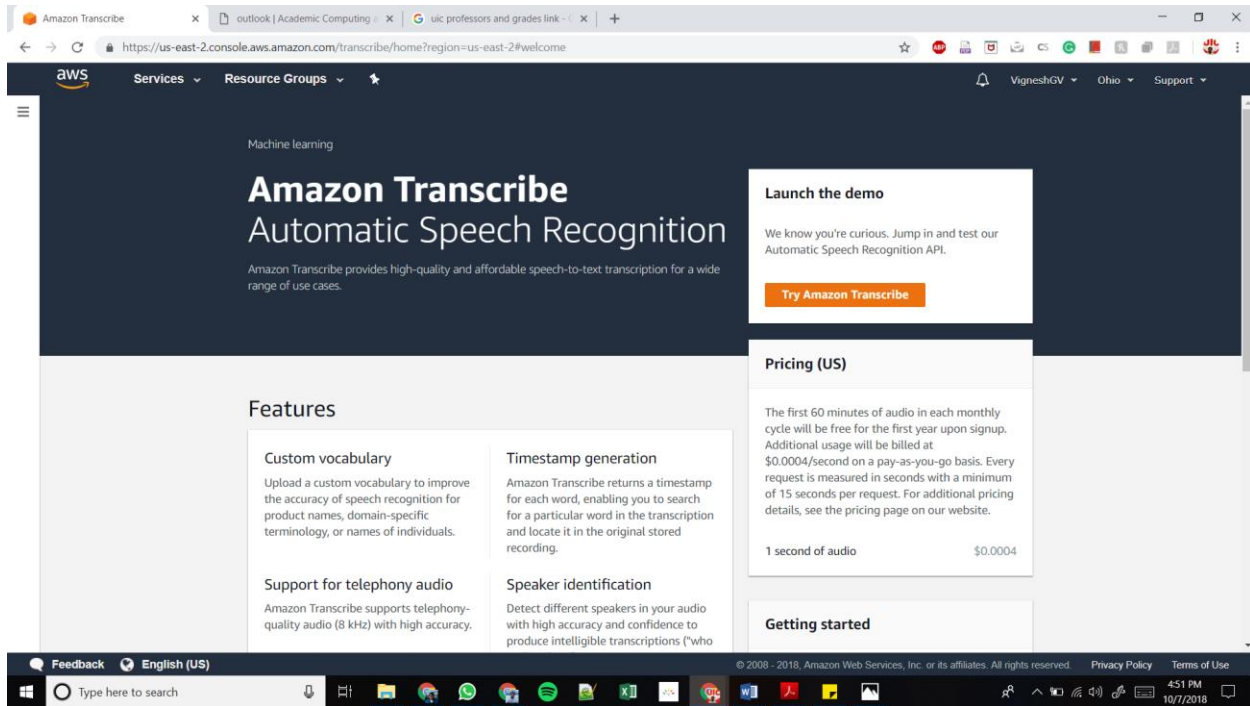






Step – 3: Accessing Amazon Transcribe and initiate conversion

- Open Amazon Transcribe by clicking on Try Amazon Transcribe



- Click on Create Job for creating your first job.

The screenshot shows the Amazon Transcribe console in the AWS Management Console. The left sidebar has a search bar and a list of services, with 'Transcription jobs' selected. The main content area displays a table of transcription jobs. The table has columns for Name, Language, Output location, Creation Time, and Status. Two jobs are listed: 'IBMwatsonweek6Oct4' and 'IDS594IBMWatsonSep27PresentationFeedback'. The first job is 'In progress' and the second is 'Complete'.

Name	Language	Output location	Creation Time	Status
IBMwatsonweek6Oct4	English	Customer S3 bucket	10/6/2018, 4:55:25 PM	In progress
IDS594IBMWatsonSep27PresentationFeedback	English	Customer S3 bucket	10/1/2018, 2:19:08 PM	Complete

- To input all the fields given below, you need all the details of the mp3 file that you uploaded in S3

The screenshot shows the 'Create transcription job' form in the Amazon Transcribe console. The form is divided into two main sections: 'Input' and 'Choose output location'. The 'Input' section contains fields for Name, S3 input URL, Language, Format, Audio sampling rate (Hz), and Apply custom vocabulary. The 'Choose output location' section contains a radio button for 'My own bucket' and a radio button for 'Amazon default bucket'.

Input

Name:

The name can be up to 255 characters long. Valid characters are a-z, A-Z, 0-9 and - (hyphen).

S3 input URL:

Type or paste the URL of your input audio file in S3.

Valid formats for audio files are mp3, mpeg, wav, and flac.

Language:

Choose the language of the input audio.

Format:

Choose the format of your audio file.

Valid formats for the audio are mp3, mpeg, wav and flac.

Audio sampling rate (Hz) - optional:

Type the sampling rate of the input audio file.

Must be an integer between 8000 and 48000.

Apply custom vocabulary - optional:

A custom vocabulary improves the accuracy of recognizing words, phrases, and commands.

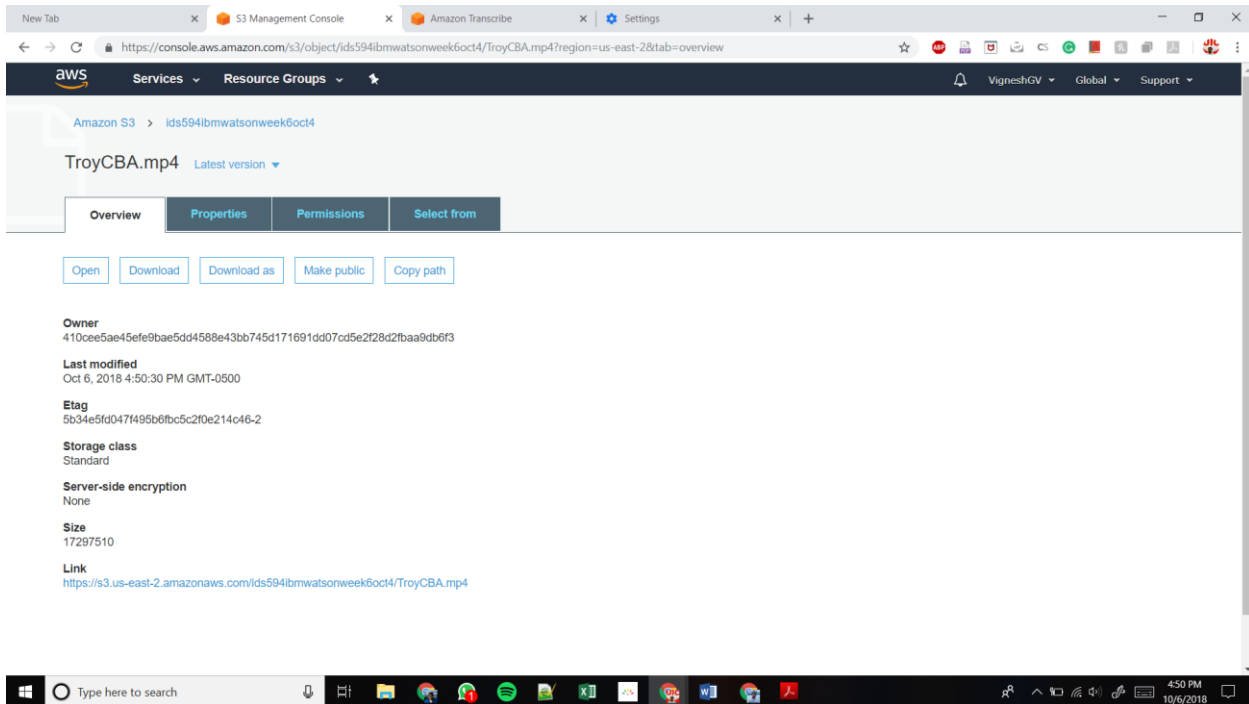
Choose output location

Data source:

☐ My own bucket

☒ Amazon default bucket

- Copy the link, bucket name and file name you gave for the mp3 file from below.



- Fill all the inputs you copied from the file details in the S3 bucket
- Provide appropriate File format (mp3 or mp4)
- Provide the number of speakers in the audio file for Speaker Identification option

- You can choose the output location of the converted file – you can choose your own bucket or Amazon default bucket. I have used my own bucket by giving the bucket name as shown below

aws Services Resource Groups

Amazon Transcribe > Create transcription job

Create transcription job

Input Info

Name
IBMwatsonweek6Oct4
The name can be up to 200 characters long. Valid characters are a-z, A-Z, 0-9 and - (hyphen).

S3 input URL
Type or paste the URL of your input audio file in S3.
https://s3.us-east-2.amazonaws.com/ids594bmwatsonweek6oct4/week6oct4.mp4
Valid formats for audio files are mp3, mp4, wav, and flac.

Language
Choose the language of the input audio.
English ▼

Format
Choose the format of your audio file.
mp4 ▼
Valid formats for the audio are mp3, mp4, wav and flac.

Audio sampling rate (Hz) - optional
Type the sampling rate of the input audio file.

Must be an integer between 8000 and 48000

Apply custom vocabulary - optional Info
A custom vocabulary improves the accuracy of recognizing words, phrases, and commands.
▼

Channel identification Info
Splits multi-channel audio file into separate channels for transcription.
☐ Disabled
☐ Enabled

Speaker identification Info
Identifies speakers in the input audio file.
☐ Disabled
☒ Enabled

Maximum number of speakers
Providing the number of speakers can increase the accuracy of your results.
6
The maximum number of speakers is 10.

Choose output location Info

Data source
☒ My own bucket
☐ Amazon default bucket

S3 location
ids594bmwatsonweek6oct4

Cancel Create

- Click create and the conversion job will begin with the status – In progress.

The screenshot shows the Amazon Transcribe console interface. On the left, there's a sidebar with 'Transcription jobs' and 'Custom vocabulary'. The main area is titled 'Transcription jobs' and contains a table with the following data:

Name	Language	Output location	Creation Time	Status
troyCBAAspeechtotext	English	Customer S3 bucket	10/6/2018, 5:09:09 PM	Failed
TroyCBAm3	English	Customer S3 bucket	10/6/2018, 5:18:02 PM	Complete
IBMwatsonweek6Oct4	English	Customer S3 bucket	10/6/2018, 4:55:25 PM	Complete
ID5594IBMWatsonSep27PresentationFeedback	English	Customer S3 bucket	10/1/2018, 2:19:08 PM	Complete

At the bottom of the console, there's a taskbar with various application icons and a system clock showing 11:15 AM on 10/7/2018.

Step-4: Converting json file to word format

- Once the job gets completed click on the completed job to view the details

The screenshot shows the details of a completed transcription job named 'TroyCBAm3'. The 'Job details' section shows the job is 'Complete' and provides the input URL. The 'Transcription' section shows a download button for the transcription file. The 'JSON' section displays the request and response JSON data.

Job details

- Name: TroyCBAm3
- Status: Complete
- Expiration: The transcription is available for 90 more days.
- Applied vocabulary: None
- Speaker identification: Disabled
- Channel identification: Disabled
- Input URL: <https://us-east-2.amazonaws.com/s3-us-east-2.amazonaws.com/ib5594ibmwatsonweek6oct4/TroyCBAm3.mp3>

Transcription

Select download to save a local copy of the transcription.

JSON

Use the Amazon Transcribe API to manage your transcriptions. Learn more

Request

```
{
  "TranscriptionJobName": "TroyCBAm3",
  "LanguageCode": "en-US",
  "MediaFormat": "mp3",
  "Media": {
    "S3Uri": "https://us-east-2.amazonaws.com/s3-us-east-2.amazonaws.com/ib5594ibmwatsonweek6oct4/TroyCBAm3.mp3"
  }
}
```

Response

```
{
  "TranscriptionJob": {
    "TranscriptionJobName": "TroyCBAm3",
    "TranscriptionJobStatus": "COMPLETED",
    "LanguageCode": "en-US",
    "MediaFormat": "mp3",
    "Media": {
      "S3Uri": "https://us-east-2.amazonaws.com/s3-us-east-2.amazonaws.com/ib5594ibmwatsonweek6oct4/TroyCBAm3.mp3"
    },
    "Transcript": {
      "TranscriptS3Uri": "https://us-east-2.amazonaws.com/s3-us-east-2.amazonaws.com/ib5594ibmwatsonweek6oct4/TroyCBAm3.json"
    },
    "CreationTime": "2018-10-06T22:05:02.388Z",
    "CompletionTime": "2018-10-06T22:04:44.842Z",
    "Settings": {
      "ShowSpeakerLabels": true,
      "ShowSegmentLabels": false,
      "ChannelIdentification": false
    }
  }
}
```

- Open your S3 bucket to view the converted json file.

The screenshot shows the Amazon S3 Management Console interface. The browser address bar displays the URL: <https://console.aws.amazon.com/s3/buckets/ids594ibmwatsonweek6oct4/?region=us-east-2&tab=overview>. The console header includes the AWS logo, navigation tabs for Services, Resource Groups, and a user profile for VigneshGV. The main content area is titled 'Amazon S3 > ids594ibmwatsonweek6oct4' and features tabs for Overview, Properties, Permissions, and Management. Below the tabs is a search bar with the placeholder text 'Type a prefix and press Enter to search. Press ESC to clear.' and buttons for Upload, Create folder, and Actions. The region is set to 'US East (Ohio)'. A table lists the objects in the bucket:

Name	Last modified	Size	Storage class
.write_access_check_file.temp	Oct 6, 2018 5:18:03 PM GMT-0500	2.0 B	Standard
IBMwatsonweek6Oct4.json	Oct 6, 2018 5:26:28 PM GMT-0500	1.4 MB	Standard
TroyCBA.mp3	Oct 6, 2018 5:17:34 PM GMT-0500	10.7 MB	Standard
TroyCBAmp3.json	Oct 6, 2018 5:34:44 PM GMT-0500	677.5 KB	Standard
week6oct4.mp4	Oct 6, 2018 4:50:25 PM GMT-0500	23.8 MB	Standard

The Windows taskbar at the bottom shows the time as 1:37 AM on 10/7/2018.

The screenshot shows the Amazon S3 Management Console interface for the object 'IBMwatsonweek6Oct4.json'. The browser address bar displays the URL: <https://console.aws.amazon.com/s3/object/ids594ibmwatsonweek6oct4/IBMwatsonweek6Oct4.json?region=us-east-2&tab=overview>. The console header is the same as the previous screenshot. The main content area is titled 'Amazon S3 > ids594ibmwatsonweek6oct4' and features tabs for Overview, Properties, Permissions, and Select from. Below the tabs are buttons for Open, Download, Download as, Make public, and Copy path. The object details are displayed below:

Owner
410cee5ae45efe9bae5dd4588e43bb745d171691dd07cd5e2f2b8d2fbaa9db0f3

Last modified
Oct 6, 2018 5:26:28 PM GMT-0500

Etag
f25c9ad21fe86c7e7c3a4b3cddfb1c1

Storage class
Standard

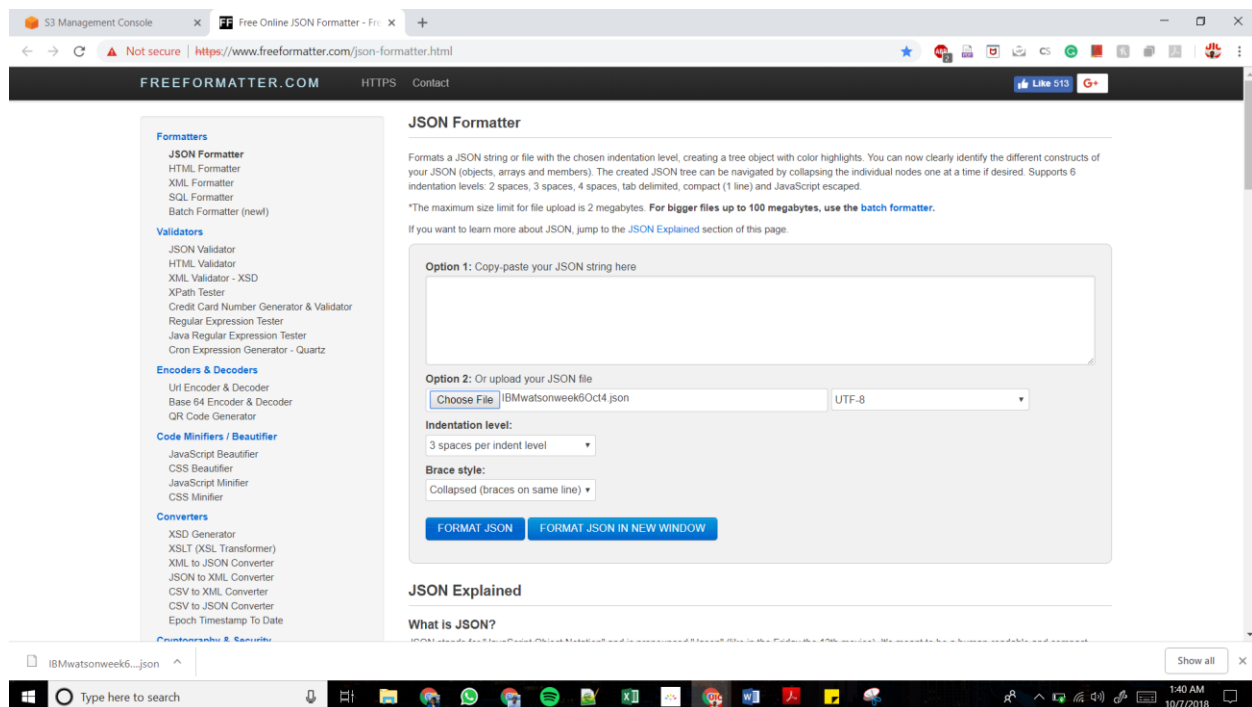
Server-side encryption
None

Size
1438554

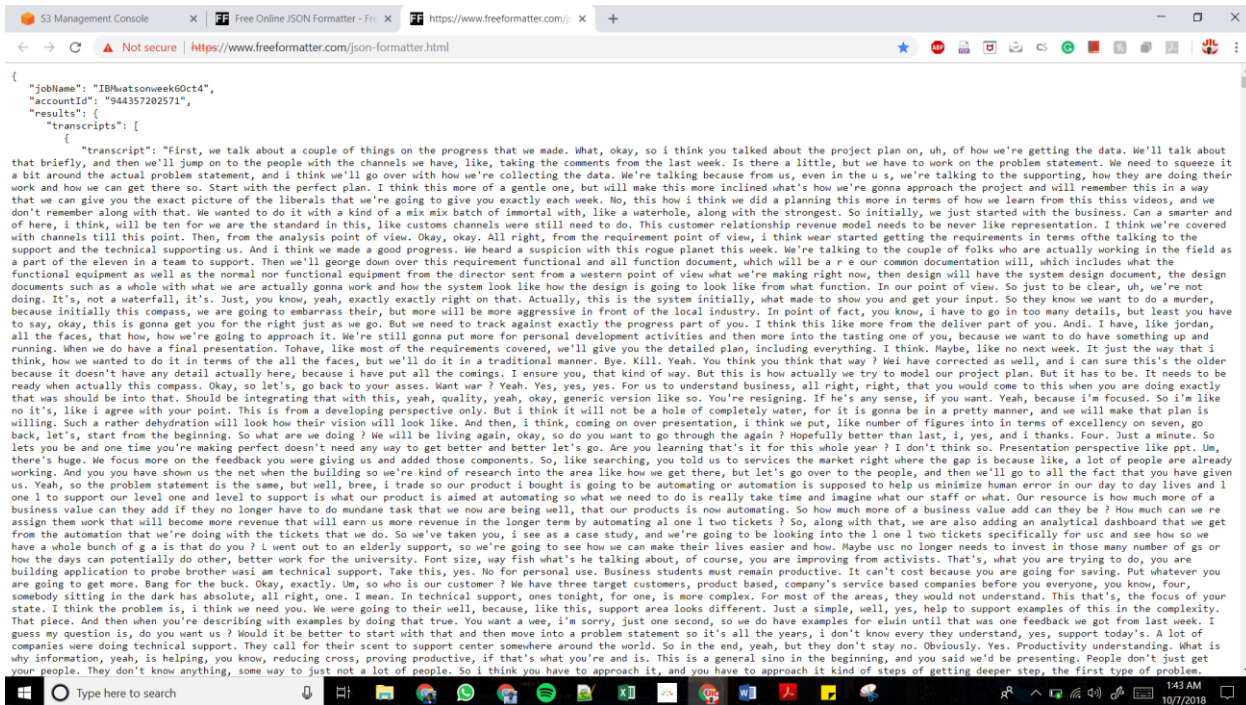
Link
<https://s3.us-east-2.amazonaws.com/ids594ibmwatsonweek6oct4/IBMwatsonweek6Oct4.json>

The Windows taskbar at the bottom shows the time as 1:37 AM on 10/7/2018.

- Download the json file to convert it into readable word format.
- I have used an online resource called “freeformatter.com” to convert json to word



- The online tool converts the json format into word format as shown below.



- The amazon transcribe is not accurate in terms of spelling and grammar. So, you can use spell check in MS word or a useful online resource called “Grammarly”. I have used both for arriving the final text document.

Resources Used:

- mp3, mp4 audio files
- AWS Amazon S3 and Amazon Transcribe
- <https://freeformatter.com/>
- <https://app.grammarly.com/>
- MS Word