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Create an Audio Transcript with Amazon Transcribe

TUTORIAL



Overview

In this step-by-step tutorial, you will learn how to use [Amazon Transcribe](#) to create a text transcript of a recorded audio file using the [AWS Management Console](#). Amazon Transcribe is an automatic speech recognition (ASR) service that makes it easy for developers to add speech-to-text capability to their applications. Using the Amazon Transcribe API, you can analyze audio files stored in Amazon Simple Storage Service (Amazon S3) and have the service return a text file of the transcribed speech.

As a developer, creating transcriptions of customer service calls or generating and video content are common challenges requiring speech-to-text capabilities. These could be solved by building your own machine learning models from scratch. However, this

In this tutorial you will download a sample audio file then upload it to an Amazon S3 bucket that you will create. Then you will use Amazon Transcribe to create a transcript from the sample audio clip using the AWS Management Console.

This tutorial is a demo of the functionality that is available when using the AWS CLI or the [Amazon Transcribe API](#). For production or proof of concept implementations, we recommend using these programmatic interfaces rather than the Amazon Transcribe Console.

✓ AWS experience

Beginner

⌚ Time to complete

10 minutes

\$ Cost to complete

[Free Tier](#) eligible

📌 Requirements

- AWS Account
- Recommended browser: The latest version of Chrome or Firefox

[**]Accounts created within the past 24 hours might not yet have access to the services required for this tutorial.

✍ Last updated

July 5, 2022



Tutorial

Step 1: Create an S3 bucket and upload sample audio file

In this step, you will download a sample audio file, create an S3 bucket, then upload the sample file to the S3 bucket. Amazon Transcribe accesses audio and video files for transcription exclusively from S3 buckets.

E-T

- b. Select [AWS Management Console](#) to open the console in a new browser window, so you can keep this step-by-step guide open. When the screen loads, enter your user name and password to get started. Using the **Region** drop down, select a Region that has Amazon Transcribe.

The screenshot shows the AWS Management Console Home page. At the top right, there is a dropdown menu labeled "Oregon". A list of AWS Regions is displayed, with "US West (Oregon)" highlighted in orange. Other regions listed include US East (N. Virginia), US East (Ohio), US West (N. California), Africa (Cape Town), Asia Pacific (Hong Kong), Asia Pacific (Jakarta), Asia Pacific (Mumbai), Asia Pacific (Osaka), Asia Pacific (Seoul), Asia Pacific (Singapore), Asia Pacific (Sydney), Asia Pacific (Tokyo), and Canada (Central). On the left, there is a "Recently visited" section with links to various AWS services like AWS Cost Explorer, EC2, Cloud9, IAM, CloudFormation, S3, RDS, VPC, AWS Backup, Elastic Container Registry, and Elastic Container Service. Below that is a "Welcome to AWS" section with a "Getting started with AWS" link. The URL in the address bar is "https://console.aws.amazon.com/console/home".

- c. Type **S3** in the search bar and select **S3** to open the console.

The screenshot shows the AWS Management Console search results for "S3". The search bar at the top contains "S3". Below it, the "Services" section is expanded, showing "S3" as the top result with a red box around it. "S3" is described as "Scalable Storage in the Cloud" with "Top features" including "Buckets", "Access points", and "Batch Operations". Other services listed include "S3 Glacier", "Athena", and "AWS Snow Family". The URL in the address bar is "https://console.aws.amazon.com/search/home?query=S3".

If you have already created S3 buckets, your S3 dashboard will list all the buckets you have created.

The screenshot shows the AWS S3 Buckets dashboard. On the left, there's a sidebar with links like 'Buckets', 'Access Points', 'Object Lambda Access Points', etc. The main area has a heading 'Account snapshot' with a link to 'View Storage Lens dashboard'. Below it is a table titled 'Buckets (0) Info' with a single row: 'Name' (empty), 'AWS Region' (empty), 'Access' (empty), and 'Creation date' (empty). A message says 'No buckets' and 'You don't have any buckets.' At the bottom of the table is a large 'Create bucket' button, which is also highlighted with a red box.

e. Enter a unique bucket name. Bucket names must be unique across all existing bucket names in Amazon S3. There are a number of other [restrictions on S3 bucket names](#) as well. Then select a Region to create your bucket in.

The screenshot shows the 'Create bucket' configuration page. It has a header 'Create bucket Info' and a note that buckets are containers for data stored in S3. The main section is titled 'General configuration'.

- Bucket name:** The input field contains 'mysuperawsbucket', which is highlighted with a red box.
- AWS Region:** The dropdown menu is set to 'US West (Oregon) us-west-2', which is also highlighted with a red box.
- Copy settings from existing bucket - optional:** A note says 'Only the bucket settings in the following configuration are copied.' Below it is a 'Choose bucket' button.

f. You have the ability to set up permissions for your S3 bucket. Leave the default scroll down.

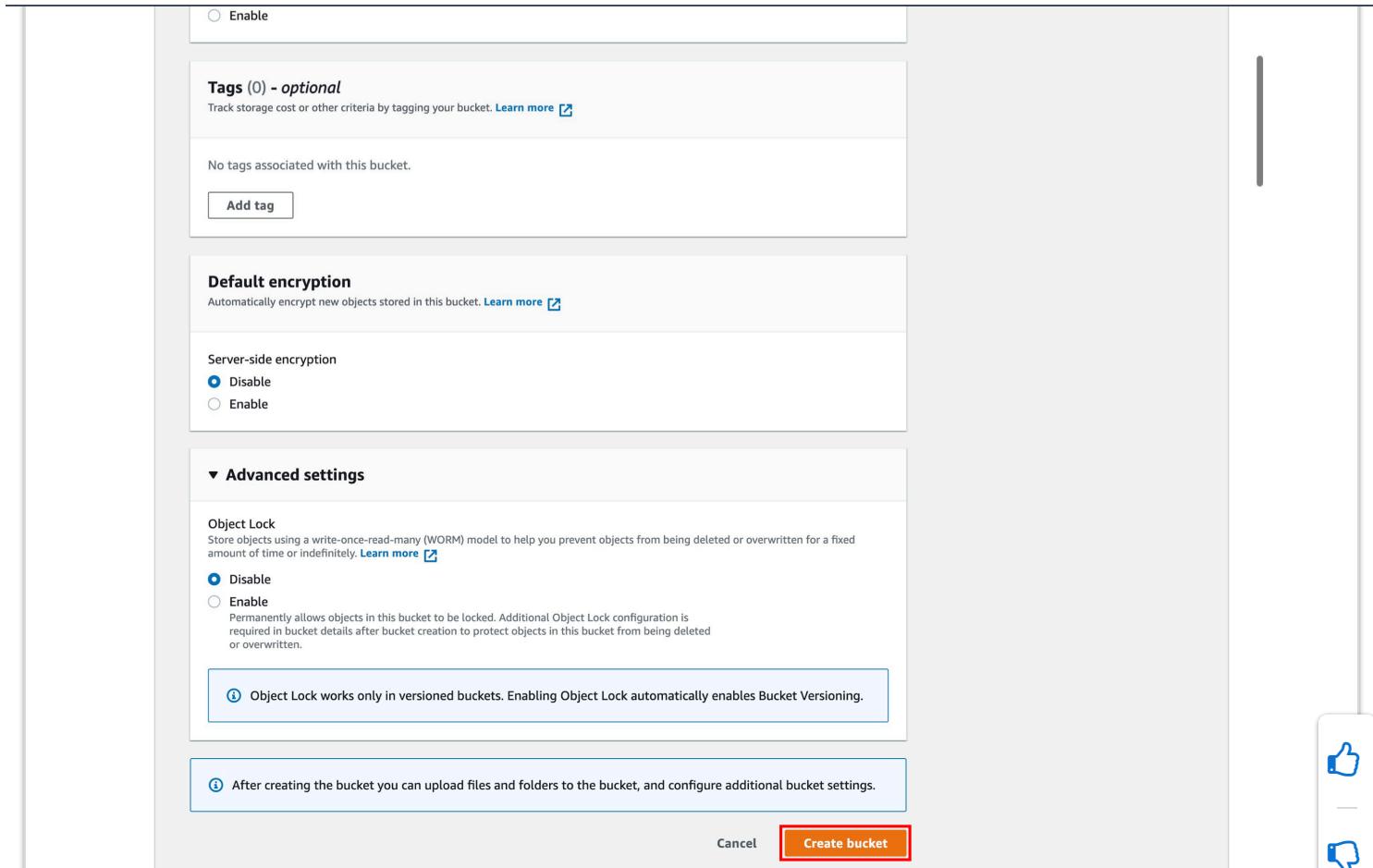
The screenshot shows the 'Block Public Access settings for this bucket' section. It includes a note about public access being granted through various methods like ACLs, bucket policies, and access point policies. A link to 'Learn more' is provided. Under the heading 'Block all public access', it says that turning this setting on is equivalent to enabling four other settings. Below this, there are four checkboxes, each preceded by a minus sign and a descriptive label: 'Block public access to buckets and objects granted through new access control lists (ACLs)', 'Block public access to buckets and objects granted through any access control lists (ACLs)', 'Block public access to buckets and objects granted through new public bucket or access point policies', and 'Block public and cross-account access to buckets and objects through any public bucket or access point policies'. Each checkbox has a corresponding note below it.

g. You have many useful options for your S3 bucket including [Versioning](#), [Server Access Logging](#), [Tags](#), [Object-level Logging](#), and [Default Encryption](#). We won't enable these features for this tutorial.

Select **Create bucket**.

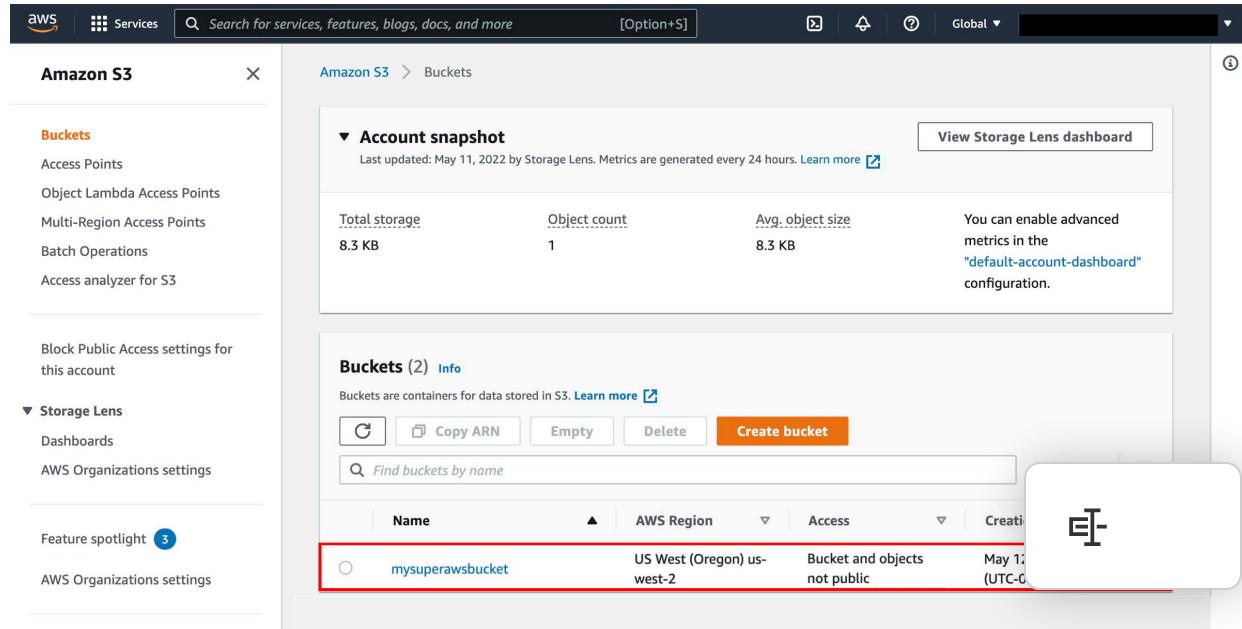


E-T



The screenshot shows the 'Advanced settings' section of the S3 bucket creation wizard. It includes options for Object Lock (Disable selected), a note about Object Lock working in versioned buckets, and a note about configuring additional bucket settings after creation. At the bottom are 'Cancel' and 'Create bucket' buttons.

h. You will see your new bucket in the S3 console. Click on your bucket's name to navigate to the bucket. Your bucket name will not be the same as pictured in the screenshot to the right.



The screenshot shows the 'Buckets' list in the S3 console. It displays two buckets: 'mysuperawsbucket' (selected) and another unnamed bucket. A callout bubble highlights the 'mysuperawsbucket' row.

Name	AWS Region	Access	Creation Date
mysuperawsbucket	US West (Oregon) us-west-2	Bucket and objects not public	May 12 (UTC-0)

The screenshot shows the AWS S3 console interface. At the top, the path is shown as Amazon S3 > Buckets > mysuperawsbucket. Below this, the bucket name "mysuperawsbucket" is displayed with a "Info" link. A navigation bar below the bucket name includes tabs for Objects (which is selected), Properties, Permissions, Metrics, Management, and Access Points. The main content area is titled "Objects (0)". It contains a message stating that objects are fundamental entities stored in Amazon S3, and provides a link to "Amazon S3 inventory". It also mentions that others need explicit permissions to access objects. Below this message are several buttons: "Copy", "Copy S3 URI", "Copy URL", "Download", "Open", "Delete", "Actions", "Create folder", and "Upload". The "Upload" button is highlighted with a red box. A search bar labeled "Find objects by prefix" is present. A table header with columns "Name", "Type", "Last modified", "Size", and "Storage class" is shown, followed by a message "No objects" and the text "You don't have any objects in this bucket.". Another "Upload" button is located at the bottom of this section, also highlighted with a red box.

- j. Upload the *transcribe-sample.mp3* file by selecting **Add files** and selecting the file or dragging the transcribe-sample.mp3 file to the upload box.

Select **Upload**.



S3 REST API. Learn more [\[?\]](#)

Drag and drop files and folders you want to upload here, or choose Add files, or Add folders.

Files and folders (1 Total, 410.2 KB)

All files and folders in this table will be uploaded.

	Name	Folder	Type	Size
<input type="checkbox"/>	transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3	-	audio/mpeg	410.2 KB

Destination

Destination
<s3://mysuperawsbucket>

▶ Destination details
Bucket settings that impact new objects stored in the specified destination.

▶ Permissions
Grant public access and access to other AWS accounts.

▶ Properties
Specify storage class, encryption settings, tags, and more.

Cancel **Upload**

- k. On successful upload, select the *transcribe-sample.mp3* file in your bucket. A file detail page will be displayed for the transcribe-sample.mp3 file. Copy the S3 URI link to the file and save it for use later in the tutorial.

aws Services [Option+S] Global ▾

Amazon S3 ×

Amazon S3 > Buckets > [mysuperawsbucket](#) > [transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3](#) [Info](#)

transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3 [Info](#)

Copy S3 URI [Download](#) [Open](#) [Object actions](#)

Properties [Permissions](#) [Versions](#)

Object overview

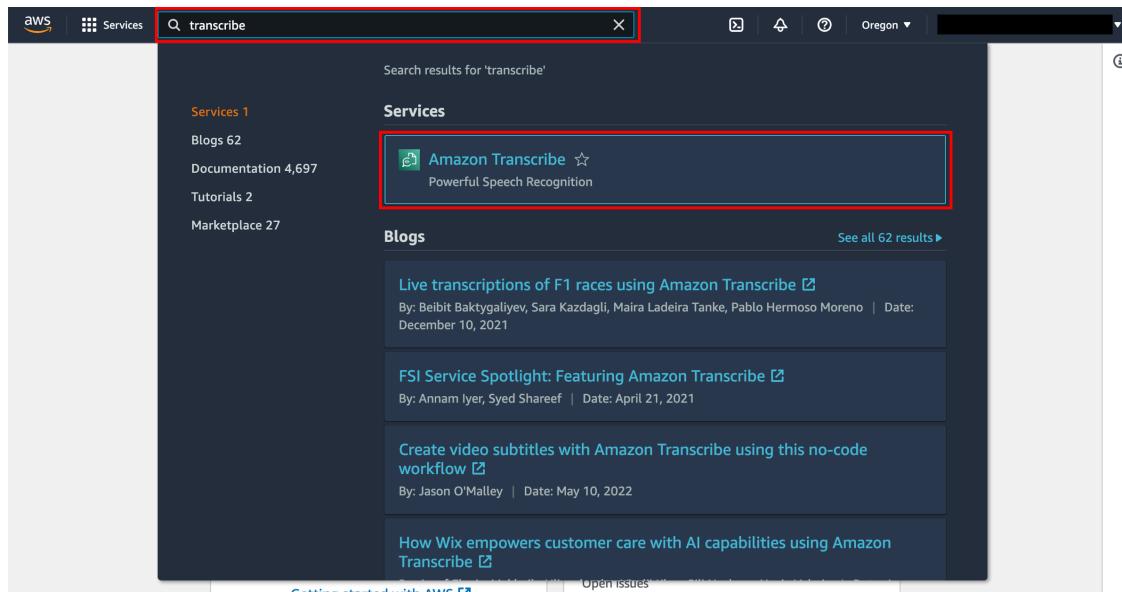
Owner	s3://mysuperawsbucket/transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3
AWS Region	US West (Oregon) us-west-2
Last modified	June 1, 2022, 11:06:18 (UTC-07:00)
Size	410.2 KB

S3 URI
<s3://mysuperawsbucket/transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3>

Amazon Resource Name (ARN)
<arn:aws:s3:::mysuperawsbucket/transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3>

Entity tag (Etag)
<bf153e303affbb6e54feb0a233879d4>

- a. From the top menu bar, select **Services** then begin typing *Transcribe* in the search bar and select **Amazon Transcribe** to open the service console.



- b. On the Amazon Transcribe console main page, open the navigation pane and click **Transcription jobs**.

The screenshot shows the Amazon Transcribe service console. The left sidebar has a navigation menu with options like 'Real-time transcription', 'Transcription jobs' (which is selected and highlighted with a red box), 'Custom language model', 'Custom vocabulary', 'Vocabulary filtering', 'Amazon Transcribe Call Analytics', 'Call analytics jobs', 'Call analytics categories', 'Amazon Transcribe Medical', 'Real-time transcription', 'Transcription jobs', and 'Custom vocabulary'. The main content area features the heading 'Amazon Transcribe Automatic Speech Recognition'. It includes sections for 'What's new?' (Amazon Transcribe Call Analytics), 'Sample use cases' (Call analytics and Media content search and monetization), and 'Pricing (US)'. A sidebar on the right provides information about starting transcription and video processing.

- c. On the **Transcription jobs** page, click **Create job**.

The screenshot shows the Amazon Transcribe service interface. On the left, there's a sidebar with two main sections: 'Amazon Transcribe Call Analytics' and 'Amazon Transcribe Medical'. Under 'Amazon Transcribe Call Analytics', there are links for 'Custom vocabulary', 'Vocabulary filtering', and 'Call analytics jobs'. Under 'Amazon Transcribe Medical', there are links for 'Real-time transcription', 'Transcription jobs', and 'Custom vocabulary'. The main content area has a table header with columns: Name, Status, Language, Language settings, Model type, Model name, and Created. Below the header, it says 'Empty resources' and 'No resources to display'. At the bottom of this section is a blue 'Create job' button.

- d. On the **Create transcription job** page, in the **Name** field, type *sample-transcription-job*.

Leave the default **Language** as *English*.

Leave the default **Model type** as *General model*.

In the **Input file location on S3** field, paste the link to the sample file in your S3 bucket. The link to your sample file will be different than the one shown in the screenshot to the right.

You can use the **Custom vocabulary** feature to help Amazon Translate recognize words and phrases that are specific to your application, such as a non-English name like Etienne. You won't use this feature in this tutorial.



Configure job - optional

Name
sample-transcription-job

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

Language settings

You can transcribe your audio file in a language that you specify or have Amazon Transcribe identify and transcribe it in the predominant language.

Specific language info

If you know the language spoken in your source audio, choose this option to get the most accurate results. The options available for additional processing vary between languages.

Automatic language identification info

If you don't know the language spoken in your audio files, choose this option. You have access to fewer options for additional processing than if you choose Specific language.

Automatic multiple languages identification info

If there are multiple languages spoken in your audio files and you're not sure what these languages are, choose this option. This selection provides limited additional processing options compared to Specific language.

Language

Choose the language of the input audio.

English, US (en-US)

Model type info

Choose the type of model to use for the transcription job.

General model

To use a model that is not specialized for a particular use case, choose this option. Configuration options vary between languages.

Custom language model

To use a model that you trained for your specific use case, choose this option. This model has fewer configuration options than the general model.

► Additional settings

Input data info

Input file location on S3

Choose an input audio or video file in Amazon S3.

s3://mysuperawsbucket/transcribe-sample.5fc2109bb28268d10fb677e64b7e59256

Browse S3

Valid file formats: MP3, MP4, WAV, FLAC, AMR, OGG, and WebM.

e. Leave the default **Output data location type** as *Service-managed S3 bucket*.

Amazon Transcribe supports WebVTT (VTT) and SubRip (SRT) file types for subtitles. In the **Subtitle file format** field, you can choose either or both file types for output. If you select both types, you get two files that are exported to the same S3 bucket. Neither format is used in this tutorial.

Select **Next**.



Subtitle file format [Info](#)
 SRT (SubRip)
 VTT (WebVTT)

Tags - optional
A tag is a label you can add to a resource as metadata to help you organize, search, or filter your data. Each tag consists of a key and an optional value, in the form 'key:value'.
No tags associated with the resource.
[Add new tag](#)
You can add up to 50 more tags.

Cancel **Next**

- f. You can configure additional audio, content, and custom vocabulary settings on the [Configure job page](#).

For this tutorial, leave the default choices and select **Create job**.

Step 1
[Specify job details](#)

Step 2
Configure job - optional

Configure job - optional [Info](#)

Audio settings

Audio identification [Info](#)
Choose to split multi-channel audio into separate channels for transcription, or identify speakers in the input audio.

Alternative results [Info](#)
Enable to view more transcription results

Content removal
Content removal conceals information in the resulting transcript from your source audio file. Amazon Transcribe changes items in the transcript and does not modify the source audio.

PII reduction [Info](#)
Label the type of PII and also mask the content with the PII entity type in the transcription output. For example, (123) 456-7890 will be masked as [PHONE].

Vocabulary filtering [Info](#)
Vocabulary filtering can remove, mask or tag specified words in the final transcript.

Customization

Custom vocabulary [Info](#)
A custom vocabulary improves the accuracy of recognizing words and phrases specific to your use case.

Cancel Previous **Create job**

Step 3: Review transcription results

In this step, you will learn how to check on the progress and review the results of your transcription job.

[View the transcription results.](#)

The screenshot shows the 'Transcription jobs' page in the Amazon Transcribe console. A green banner at the top indicates 'Transcription job successfully created.' Below it, a table lists one job: 'sample-transcription-job'. The 'Status' column shows 'Complete' with a green checkmark icon. The 'Language' column is 'English, US (en-US)'. The 'Model type' is 'Specific language' and 'Model name' is 'General'. The 'Created' column shows 'June 1 2022, 19:49 (UTC-)'. The entire row for the job is highlighted with a red border.

- b. Next you will see the *sample-transcription-job* details. Scroll down to the **Transcription** panel to view the transcription job output. In the **JSON** pane you can view the transcription results as it would be returned from the Transcribe API or AWS CLI.

The screenshot shows the 'Transcription preview' and 'Application integration' panels for the 'sample-transcription-job'.

Transcription preview: This panel displays the transcribed text. A red box highlights the text content, which reads: "Machine learning is employed in a range of computing tasks where designing and programming explicit algorithms with good performance is difficult or infeasible. Example applications include email filtering, detection of network intruders and computer vision. Machine learning is closely related to computational statistics, which also focuses on predictions making through the use of computer. It has strong ties to mathematical optimization, which delivers methods, theory and application domains to the field."

Tags (0): This section shows that there are no tags associated with the resource. A red box highlights the 'Tags (0)' header.

Application integration: This panel contains example API requests and responses for managing transcription jobs.

Example API request:

```

1 {
2   "TranscriptionJobName": "sample-transcription-job",
3   "LanguageCode": "en-US",
4   "MediaSampleRateHertz": 44100,
5   "MediaFormat": "mp3",
6   "Media": {
7     "MediaFileUri": "s3://mysuperawsbucket/transcribe-sample
8     .5fc2109bb28268d10fbcc677e64b7e59256783d3c.mp3"
9   }

```

Example API response:

```

1 {
2   "TranscriptionJob": {
3     "TranscriptionJobName": "sample-transcription-job",
4     "TranscriptionJobStatus": "COMPLETED",
5     "LanguageCode": "en-US",
6     "MediaSampleRateHertz": 44100,
7     "MediaFormat": "mp3",
8     "Media": {
9       "MediaFileUri": "s3://mysuperawsbucket/transcribe-sample
10    .5fc2109bb28268d10fbcc677e64b7e59256783d3c.mp3"
11   },
12   "Transcript": {
13     "TranscriptFileUri": "https://s3.us-west-2.amazonaws.com/aws-transcribe-us-west-2-prod/661972857966/sample-transcription-job/6fde908a-1a43-42b8-9eb2-89f8a35769"
14   }
15 }

```

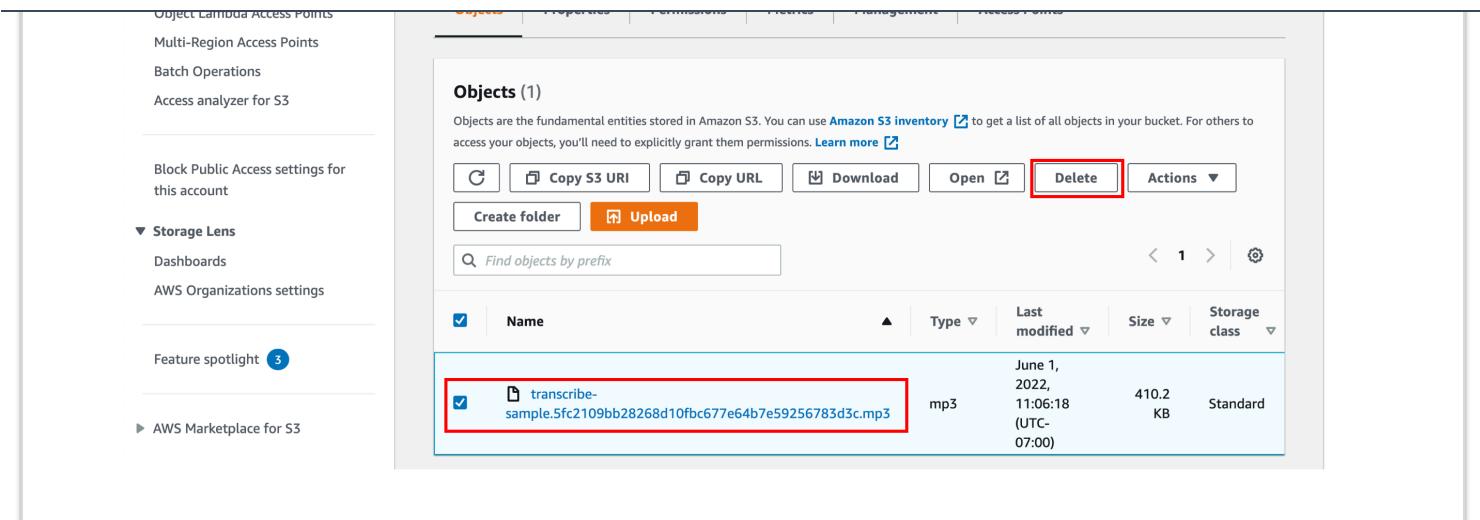
- a. In this upper navigation menu, begin typing **S3** in the search bar and select **S3** to open the console.

The screenshot shows the AWS search interface. The search bar at the top contains the text 'S3'. Below the search bar, there is a sidebar with 'Services (7)' listed under 'Features (10)'. The main area displays 'Services' results, with 'S3' being the first item. The 'S3' card includes a star icon, the text 'Scalable Storage in the Cloud', and a 'Top features' section with links for 'Buckets', 'Access points', and 'Batch Operations'. Other services listed include 'S3 Glacier', 'Athena', and 'AWS Snow Family'. A 'Features' section is also present at the bottom.

- b. Scroll through your S3 buckets and find the bucket that you created earlier in this tutorial. Click on this bucket name to view the contents of the bucket. Your bucket name will be different in the screenshot to the right.

The screenshot shows the 'Amazon S3' service console. On the left, there is a sidebar with 'Buckets', 'Storage Lens', 'Feature spotlight', and 'AWS Organizations settings'. The main area has a breadcrumb trail 'Amazon S3 > Buckets'. It features an 'Account snapshot' section with metrics like 'Total storage' (8.3 KB), 'Object count' (1), and 'Avg. object size' (8.3 KB). Below this is a 'Buckets (2)' section. The table lists two buckets: 'mysuperawsbucket' (selected, highlighted with a red box) and another unnamed bucket. The table columns are 'Name', 'AWS Region', 'Access', and 'Creation date'. A 'Create bucket' button is located at the top of the bucket list.

- c. Select the *transcribe-sample.mp3* file contained within your bucket and select the deletion.



The screenshot shows the AWS S3 console interface. On the left, there's a sidebar with various navigation links: Object Lambda Access Points, Multi-Region Access Points, Batch Operations, Access analyzer for S3, Block Public Access settings for this account, Storage Lens (with sub-links Dashboards and AWS Organizations settings), Feature spotlight (with a blue notification badge), and AWS Marketplace for S3. The main area is titled 'Objects (1)' and displays a single item: 'transcribe-sample.5fc2109bb28268d10fbc677e64b7e59256783d3c.mp3'. This item is highlighted with a red box. Below the object name is its type (mp3), last modified date (June 1, 2022, 11:06:18 (UTC-07:00)), size (410.2 KB), and storage class (Standard). At the top of the object list are several buttons: 'Copy S3 URI', 'Copy URL', 'Download', 'Open', 'Delete' (which is also highlighted with a red box), and 'Actions'.

Conclusion

As you have seen in this tutorial, Amazon Transcribe enables voice to text at scale. Use Amazon Transcribe for a wide range of audio or video files, such as customer service calls, business meetings, broadcast TV, and on-demand videos.

Was this page helpful?




Feedback



Next Steps

Learn to Translate Text at Scale

Find out how you can translate transcribed texts into other language using Amazon Translate in this tutorial.

[Next »](#)



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Learn how you can analyze sentiment in text using Amazon Comprehend in this tutorial.

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