

COS20019

Cloud Computing Architecture

Wk3: ACA Module 11 Guided Lab

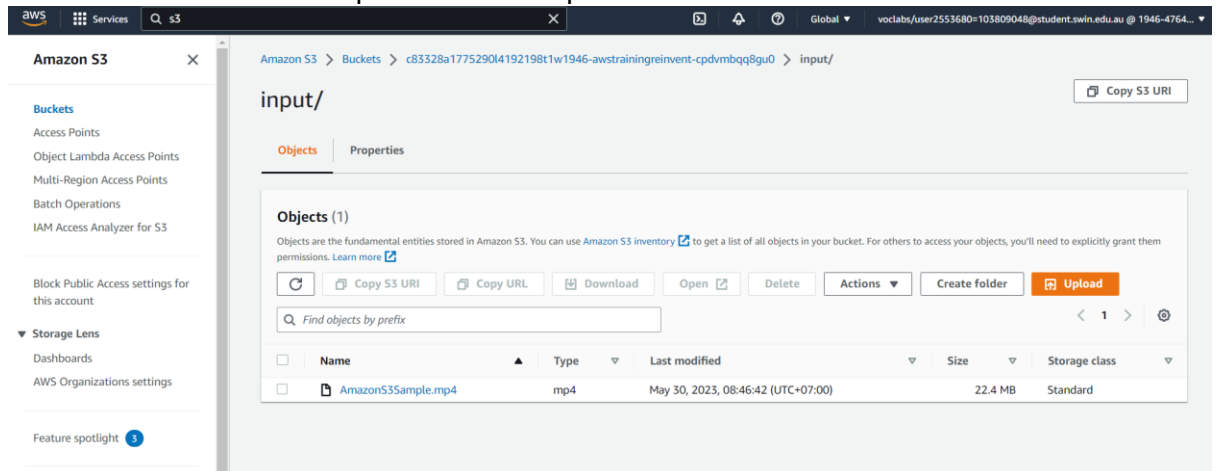
Streaming Dynamic Content using Amazon CloudFront

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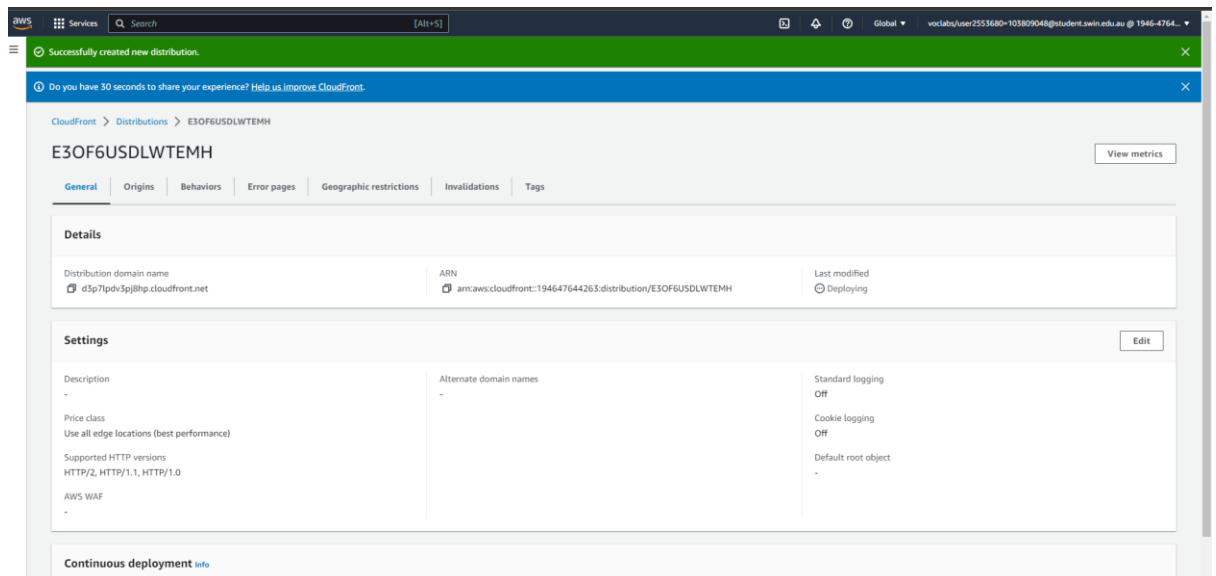
Task 1: lab preparation

1. Follow the instructions to open the folder input



Task 2: Create Amazon CloudFront Distribution

1. Create distribution based on the instruction



Task 3: Create an Amazon Elastic Transcoder Pipeline

1. The Elastic Transcoder service will assume the IAM role to access the Amazon S3 and SNS resources in my lab account

The screenshot shows the AWS Elastic Transcoder console. At the top, there's a banner for "Try the New File-Based Video Processing Option". Below that, the "Pipeline Name" is set to "InputPipeline". The "Input Bucket" is "c83328a177529041921981w1946~". The "IAM Role" is "AmazonElasticTranscoderRole". Below this, there are two sections for S3 bucket configuration: "configuration for Amazon S3 Bucket for Transcoded Files and Playlists" and "configuration for Amazon S3 Bucket for Thumbnails". Both sections show the same bucket and storage class ("Standard" for files, "Reduced Redundancy" for thumbnails).

2. Moving to the next step to create new job after successfully create the pipeline

The screenshot shows the AWS Elastic Transcoder console with the "Pipelines" tab selected. A table lists the pipeline details: ARN, Name (InputPipeline), Pipeline ID, Status (Active), and Input Bucket. Below the table, there are expandable sections for "Configuration for Amazon S3 Bucket for Transcoded Files and Playlists", "Configuration for Amazon S3 Bucket for Thumbnails", "Job Details", "Permissions", "Notifications", and "Encryption".

3. With the output/ (Output key prefix) the Elastic Transcoder will prepend this value to the names of all files that the job will create.

The screenshot shows the "Create a New Transcoding Job" page. It includes a "Pipeline" dropdown set to "InputPipeline". The "Output Key Prefix" is set to "output/". Under "Input Details (1 of 1)", the "Input Key" is "input/AmazonS3Sample.mp4". There are checkboxes for "Decryption Parameters" (set to "None"), "Available Settings" (set to "Clip"), and "Output Captions". Under "Output Details (1 of 1)", there is a "Preset" dropdown set to "Select One...", an "Output Key" field, and checkboxes for "Encryption Parameters" (set to "None") and "Available Settings" (set to "Output Captions").

4. Some settings for the output details

Try the New File-Based Video Processing Option

AWS Elemental MediaConvert is a new file-based video transcoding service that provides a comprehensive suite of advanced transcoding features, with Basic tier rates starting at \$0.0075/minute. [Read more](#) or [try MediaConvert](#)

Available Settings

☐ Output Captions

Watermarks

Preset Watermark Id

Select One...

Output Details (3 of 3)

Remove Output

Preset

System preset: Smooth 1M

Segment Duration

10

Output Key

HLS10M

Create Thumbnails

☒ No ☐ Yes

Output Rotation (Clockwise)

auto

Encryption Parameters

To enable PlayReady DRM for a Smooth playlist, in the Playlist section on this page add a Smooth playlist and fill in the PlayReady DRM fields.

Available Settings

☐ Output Captions

Watermarks

Preset Watermark Id

Select One...

+ Add Another Output

5. Configure a playlist

Try the New File-Based Video Processing Option

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Available Settings

☐ Output Captions

Watermarks

Preset Watermark Id

Select One...

+ Add Another Output

Playlist (1 of 1)

Remove Playlist

Master Playlist Name

primary

Playlist Format

HLSv3

Outputs in Master Playlist

HLS20M

+ x i

Outputs in Master Playlist

HLS15M

+ x i

Outputs in Master Playlist

HLS10M

+ x i

Content Protection

☒ None ☐ HLS AES ☐ PlayReady DRM

+ Add Playlist

► User Metadata (Optional)

Cancel

Create New Job

6. After creating the job

Try the New File-Based Video Processing Option
AWS Elemental MediaConvert is a new file-based video transcoding service that provides a comprehensive suite of advanced transcoding features, with Basic tier rates starting at \$0.0075/minute. [Read more or try MediaConvert](#)

Outputs

Preset	System preset: HLS 2M	Preset ID	1351620000001-200010
Output Key	HLS20M	Status	Submitted
Status Details		Output Duration	
Output Resolution		Thumbnail Filename Pattern	
Output Rotation (Clockwise)	auto	Segment Duration	10.0
Frame Rate		Applied Color Space Conversion	
File Size		Album Art Merge Policy	
Watermarks			
Caption Formats			

Preset	System preset: HLS 1.5M	Preset ID	1351620000001-200020
Output Key	HLS15M	Status	Submitted
Status Details		Output Duration	
Output Resolution		Thumbnail Filename Pattern	
Output Rotation (Clockwise)	auto	Segment Duration	10.0
Frame Rate		Applied Color Space Conversion	
File Size		Album Art Merge Policy	
Watermarks			
Caption Formats			

Preset	System preset: HLS 1M	Preset ID	1351620000001-200030
Output Key	HLS10M	Status	Submitted
Status Details		Output Duration	
Output Resolution		Thumbnail Filename Pattern	
Output Rotation (Clockwise)	auto	Segment Duration	10.0

Task 4: Test playback of the dynamic (multi bit-rate)

1. Distribution domain name (obtain the distribution domain name)

CloudFront > Distributions > E3OF6USDWTEMH

E3OF6USDWTEMH [View metrics](#)

General | Origins | Behaviors | Error pages | Geographic restrictions | Invalidations | Tags

Details

Property	Value
Distribution domain name	d3p7lpdv3pj8hp.cloudfront.net
ARN	amaws:cloudfront:194647644263:distribution/E3OF6USDWTEMH
Last modified	May 30, 2023 at 2:15:24 AM UTC

2. Obtain the playlist file path

Amazon S3 [Copy S3 URI](#)

output/

Objects | Properties

Objects (127)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#) [Upload](#)

Name	Type	Last modified	Size	Storage class
<input checked="" type="checkbox"/> primary.m3u8	m3u8	May 30, 2023, 09:40:48 (UTC+07:00)	340.0 B	Standard
<input type="checkbox"/> HLS20M000040.ts	ts	May 30, 2023, 09:40:47 (UTC+07:00)	590.6 KB	Standard
<input type="checkbox"/> HLS20M000039.ts	ts	May 30, 2023, 09:40:47 (UTC+07:00)	763.6 KB	Standard
<input type="checkbox"/> HLS20M000038.ts	ts	May 30, 2023, 09:40:47 (UTC+07:00)	334.3 KB	Standard
<input type="checkbox"/> HLS20M000037.ts	ts	May 30, 2023, 09:40:47 (UTC+07:00)	862.0 KB	Standard
<input type="checkbox"/> HLS20M000036.ts	ts	May 30, 2023, 09:40:47 (UTC+07:00)	902.2 KB	Standard

awsacademy.instructure.com/courses/46209/assignments/424164?module_item_id=3991809

Library

Dev

Major

Cyber

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Module 11 Guided Lab - Streaming Dynamic Content using Amazon CloudFront

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Grades

Due No Due Date

Points 100

Submitting an external tool

Submit

Details ▼

AWS

Start Lab

End Lab

1:55

Instructions

Grades

Actions ▼

Files ☐

README ☒

Terminal ☒

Source ☐

Submission Report:

[Executed at: Mon May 29 19:52:51 PDT 2023]

Testing report - A CloudFront distribution was created.

Testing report - The Pipeline was created.

Testing report - The correct storage class was chosen f

Testing report - The correct storage class was chosen f

Testing report - The Output Key Prefix is correct

Testing report - All of the selected presets are correc

Testing report - The correct Playlist Format was select

Testing report - The expected outputs were found for th

gradeFile = /mnt/vocwork2/ccc_v1_g_11ed7_28593/asn17752

reportFile = /mnt/vocwork2/ccc_v1_g_11ed7_28593/asn17752

/mnt/vocwork2/ccc_v1_g_11ed7_28593/asn1775289_15/asn177

len 4

Present working directory = /mnt/vocwork2/ccc_v1_g_11ed

Default region: us-east-1

Back in submit.sh...

Total score 40/40

[Task 2] Distribution Created 5/5

[Task 3A] Pipeline was created 5/5

[Task 3B] Transcoded File Storage 5/5

[Task 3C] Thumbnail File Storage 5/5

[Task 3D] Output Key Prefix 5/5