Module 11 Lab: Streaming Dynamic Content using Amazon CloudFront

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COS 20019- Cloud Computing Architecture

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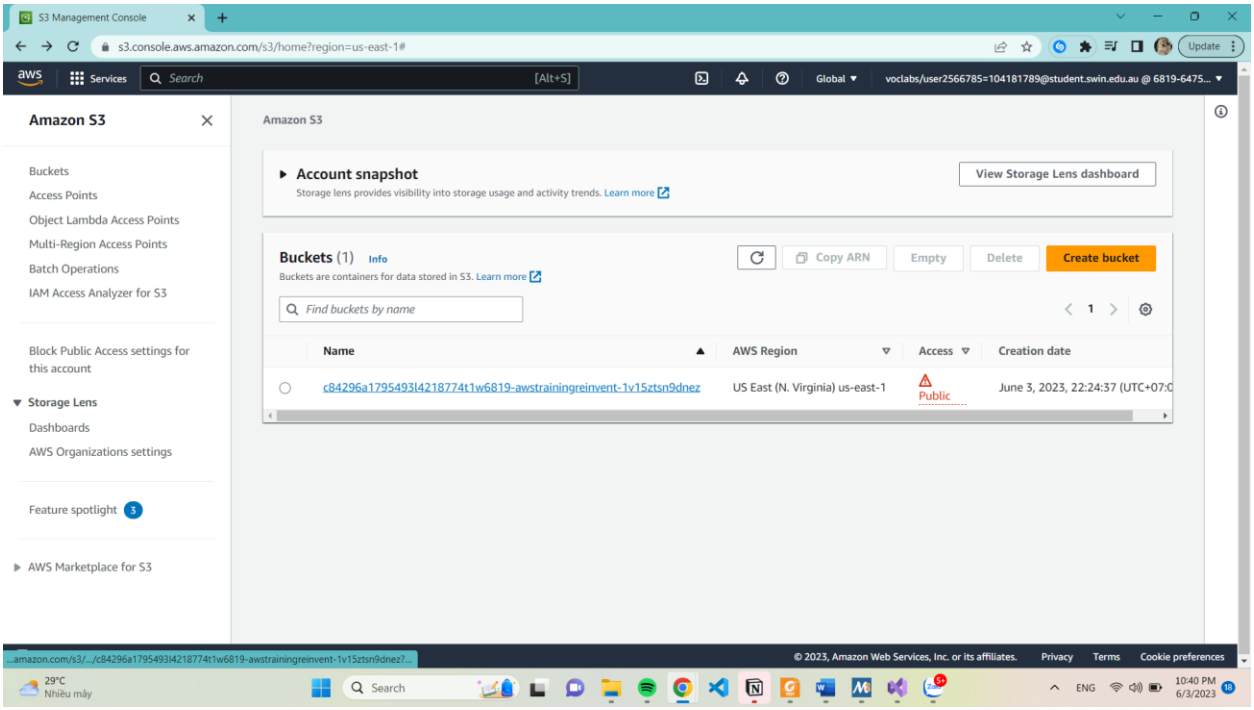
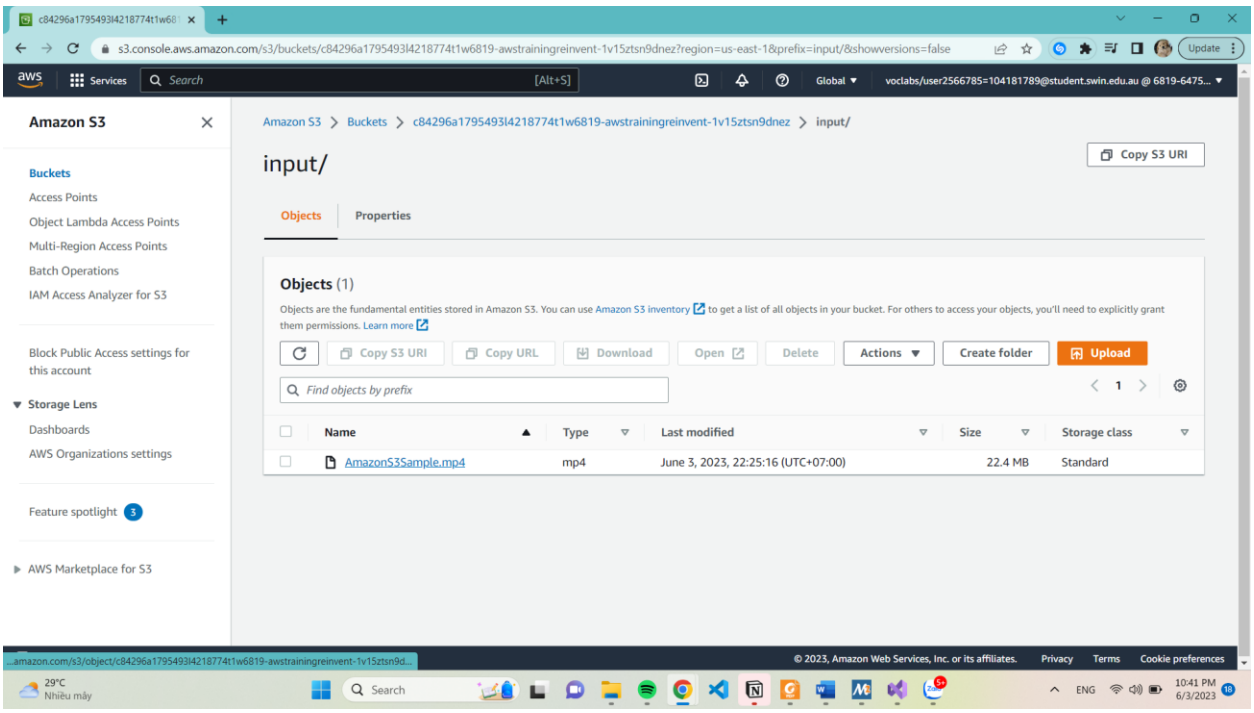
2/6/2023

So this is all my step to complete Module 11 Lab, with detailed explanation.

Task 1: Lab Preparation

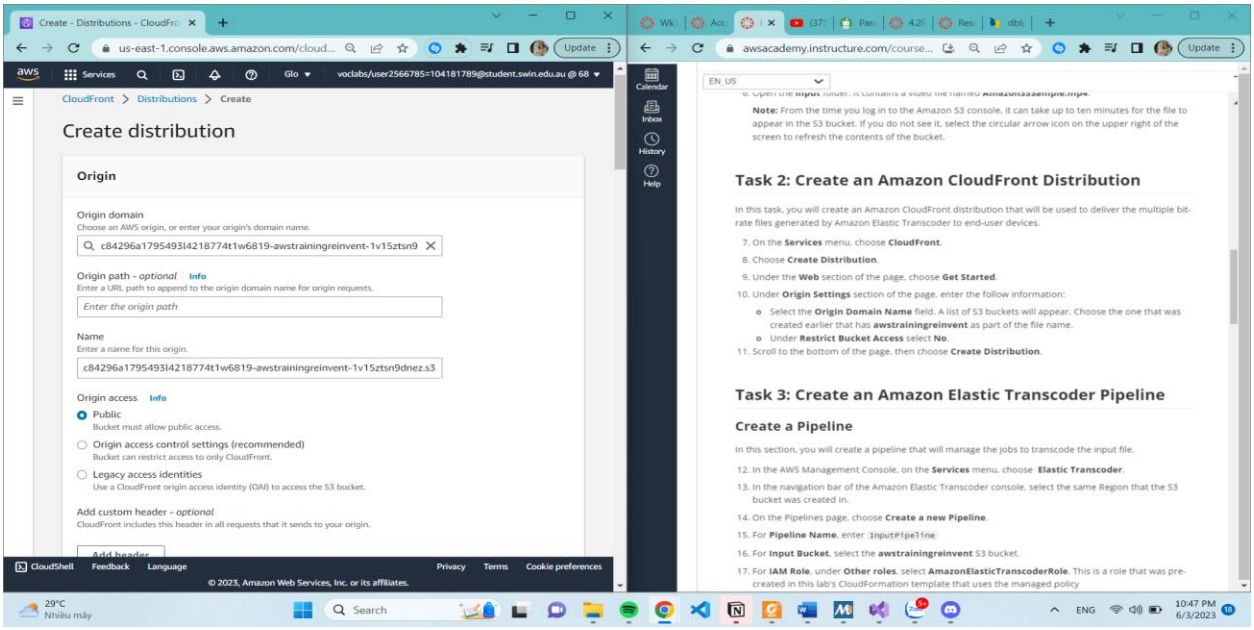


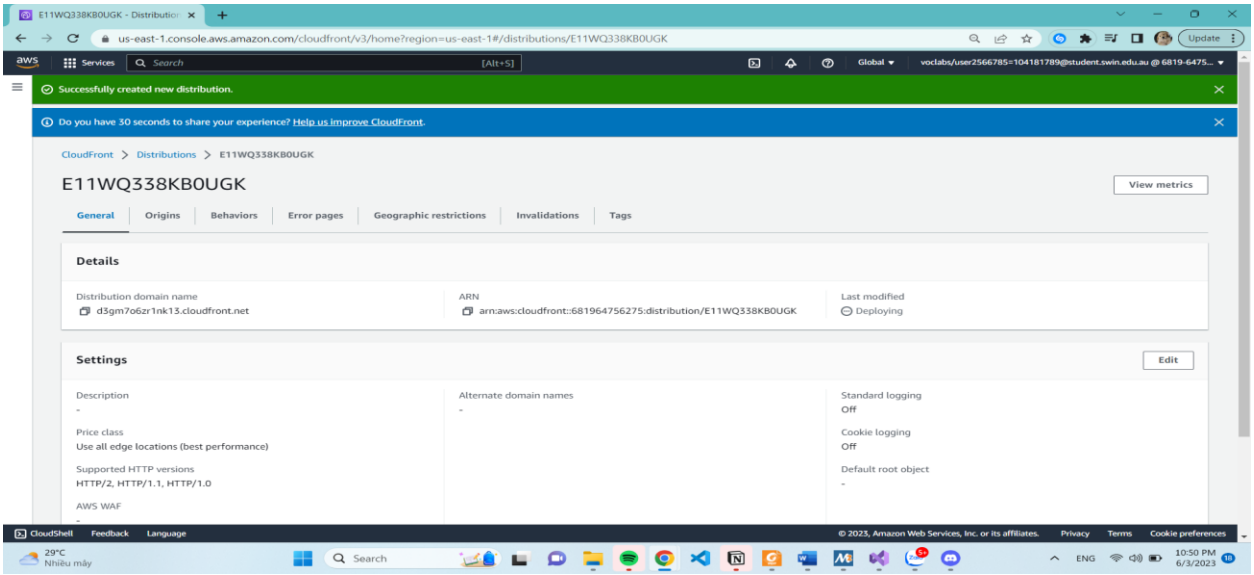


Task 2: Create an Amazon CloudFront Distribution

7-10. On the **Services** menu, choose **CloudFront.**

- Choose **Create Distribution.**
- Under the **Web** section of the page, choose **Get Started**.
- Under **Origin Settings** section of the page, enter the follow information:
- Select the **Origin Domain Name** field. A list of S3 buckets will appear. Choose the one that was created earlier that has **awstrainingreinvent** as part of the file name.
- Under **Restrict Bucket Access** select **No**.
- Scroll to the bottom of the page, then choose **Create Distribution**.

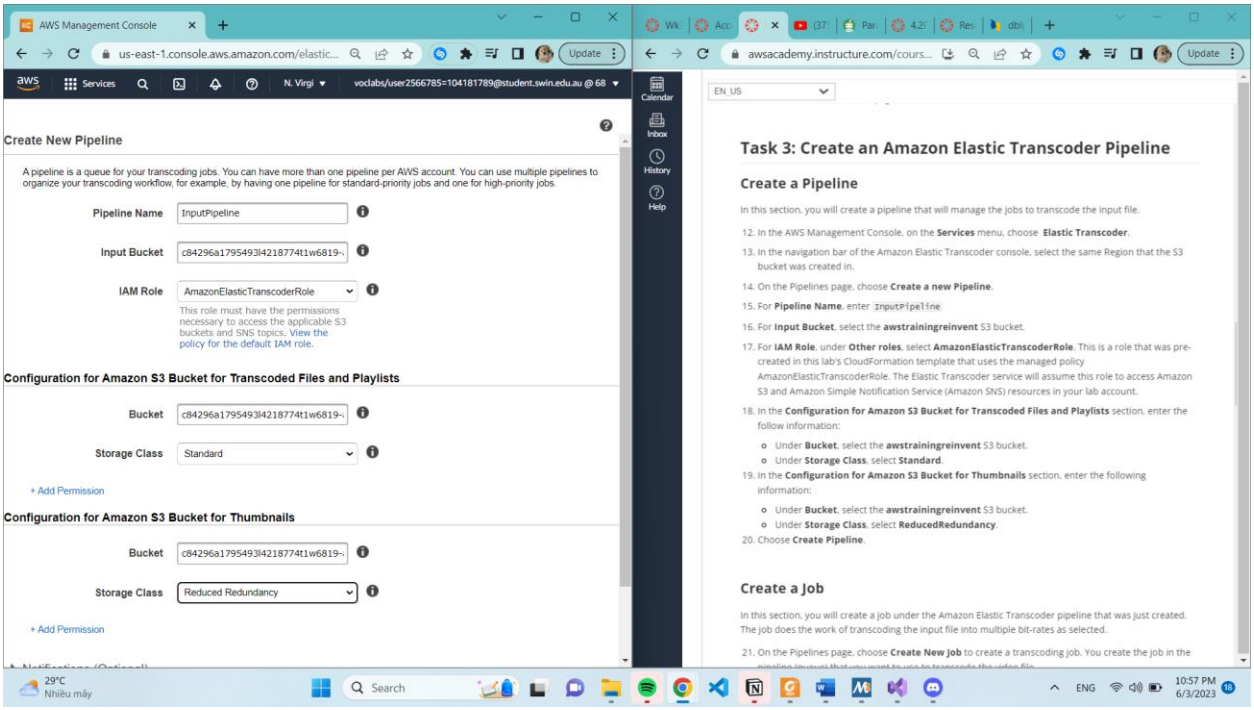




Task 3: Create an Amazon Elastic Transcoder Pipeline

12-20: In the AWS Management Console, on the **Services** menu, choose **Elastic Transcoder**.

- On the Pipelines page, choose **Create a new Pipeline**
- For **Pipeline Name**, enter InputPipeline
- For **Input Bucket**, select the awstrainingreinvent S3 bucket.
- For **IAM Role**, under **Other roles**, select **AmazonElasticTranscoderRole**.
- In the **Configuration for Amazon S3 Bucket for Transcoded Files** and Playlists section:
- Under **Bucket**, select the **awstrainingreinvent** S3 bucket.
- Under **Storage Class**, select **Standard**.
- In the **Configuration for Amazon S3 Bucket for Thumbnails** section, enter the following information:
- Under **Bucket**, select the **awstrainingreinvent** S3 bucket.
- Under **Storage Class**, select **ReducedRedundancy**.
- Choose **Create Pipeline**.

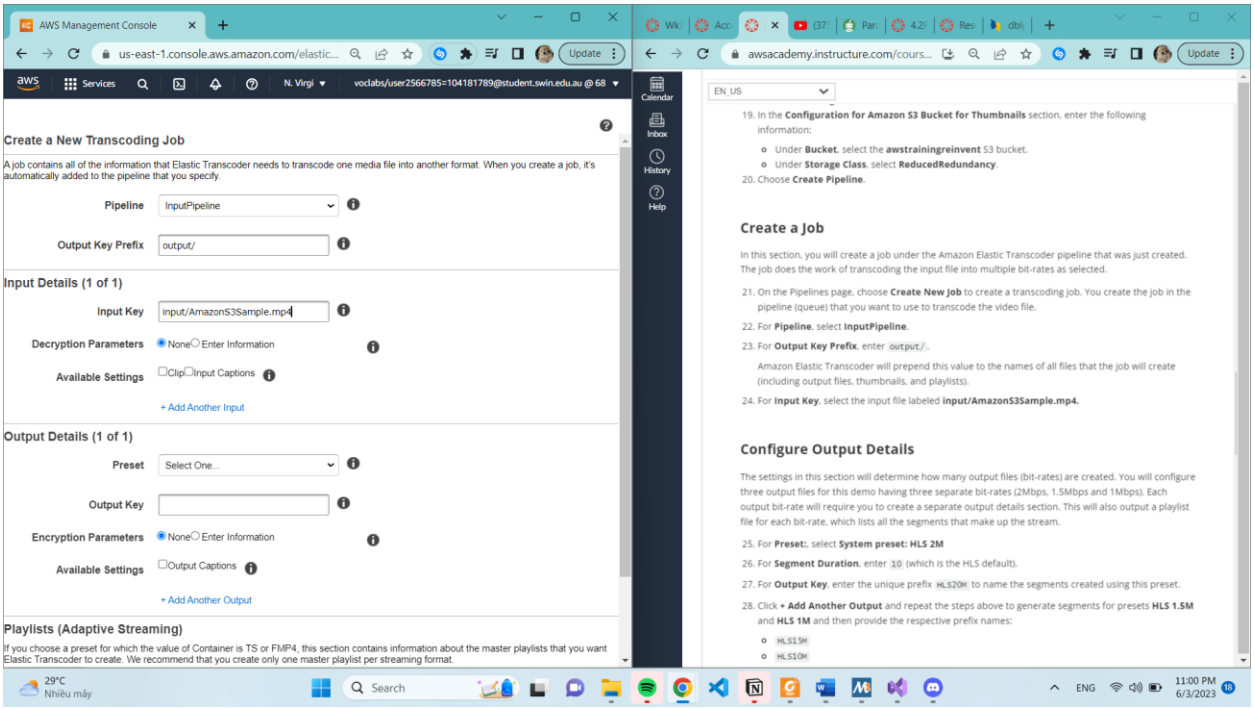


Create Job

22. For **Pipeline,** select **InputPipeline.**

23. For **Output Key Prefix**, enter output/.

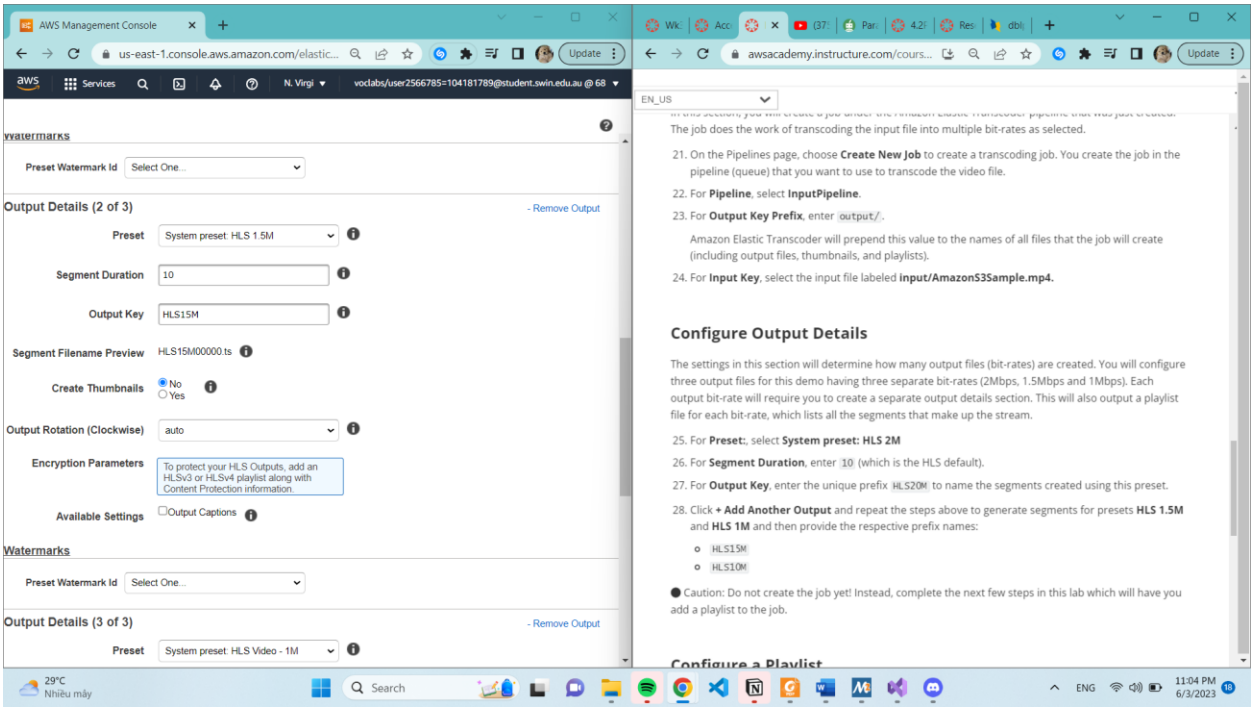
24. For **Input Key,** select the input file labeled **input/AmazonS3Sample.mp4.**

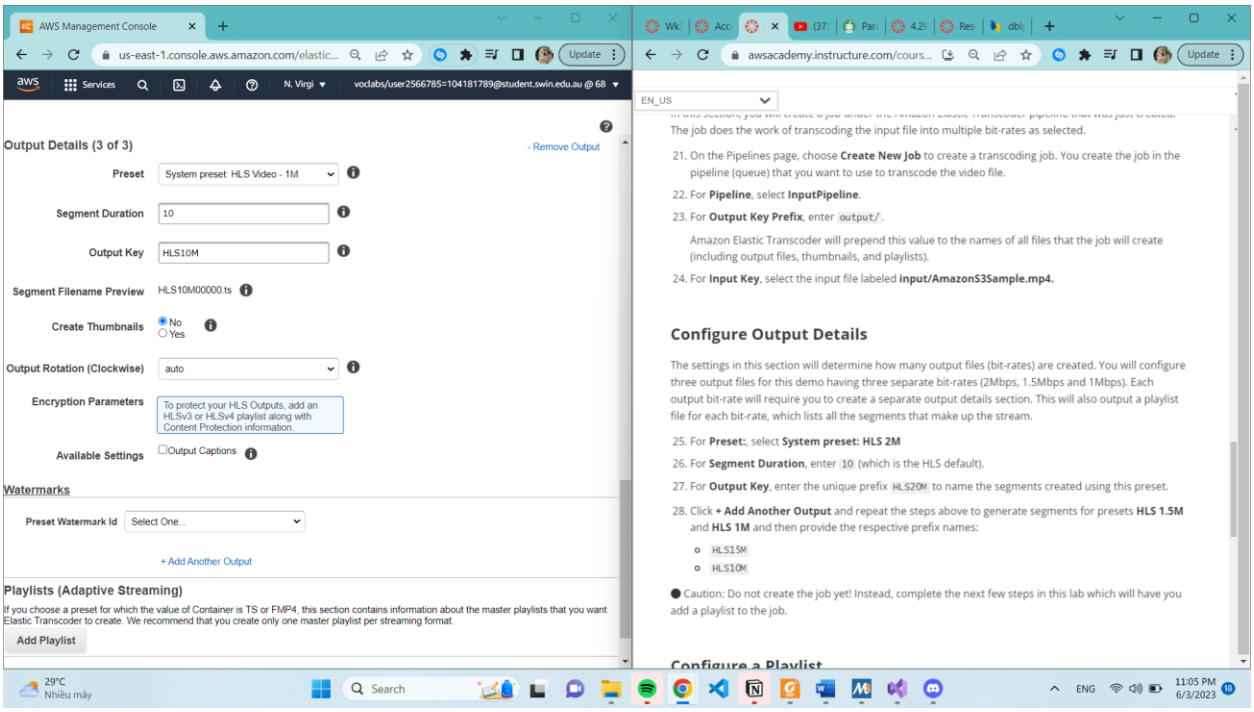


Configured Output Detail

25-28.

- For **Preset**:, select **System preset**: **HLS 2M**
- For **Segment Duration**, enter 10 (which is the HLS default).
- For **Output Key**, enter the unique prefix HLS20M to name the segments created using this preset.
- Click + **Add Another Output** and repeat the steps above to generate segments for presets **HLS 1.5M** and **HLS 1M** and then provide the respective prefix names:
    - HLS15M
    - HLS10M

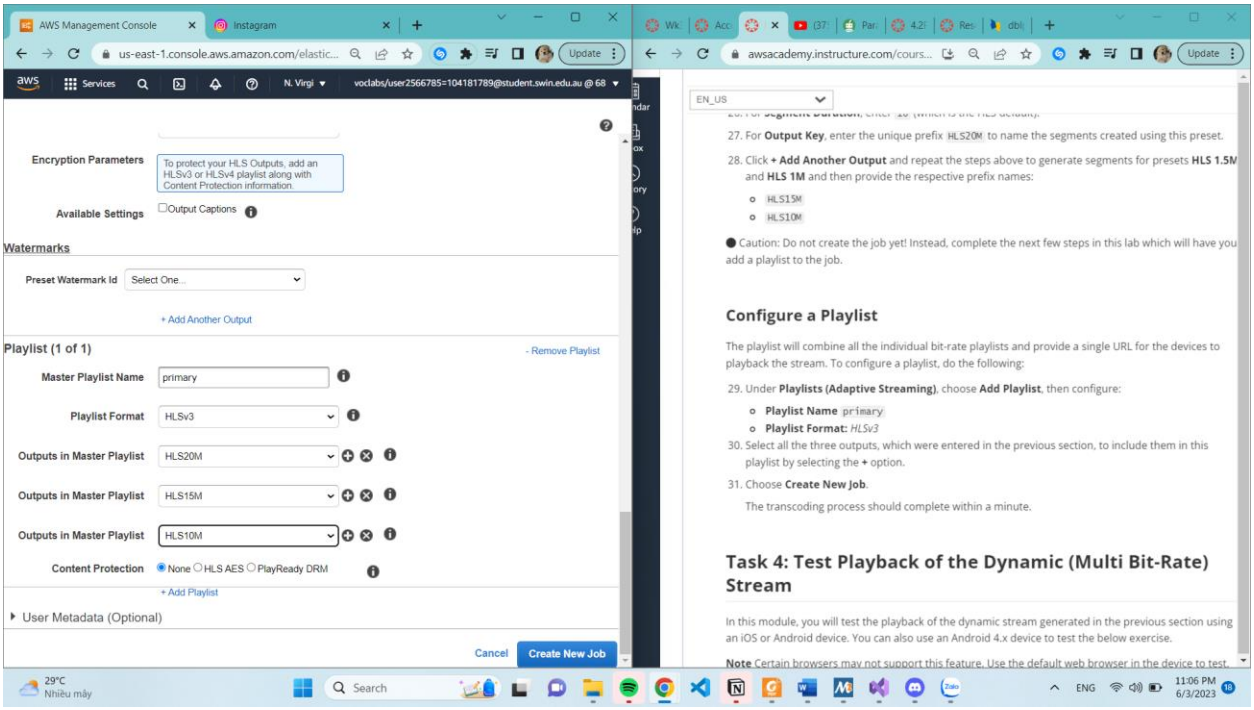


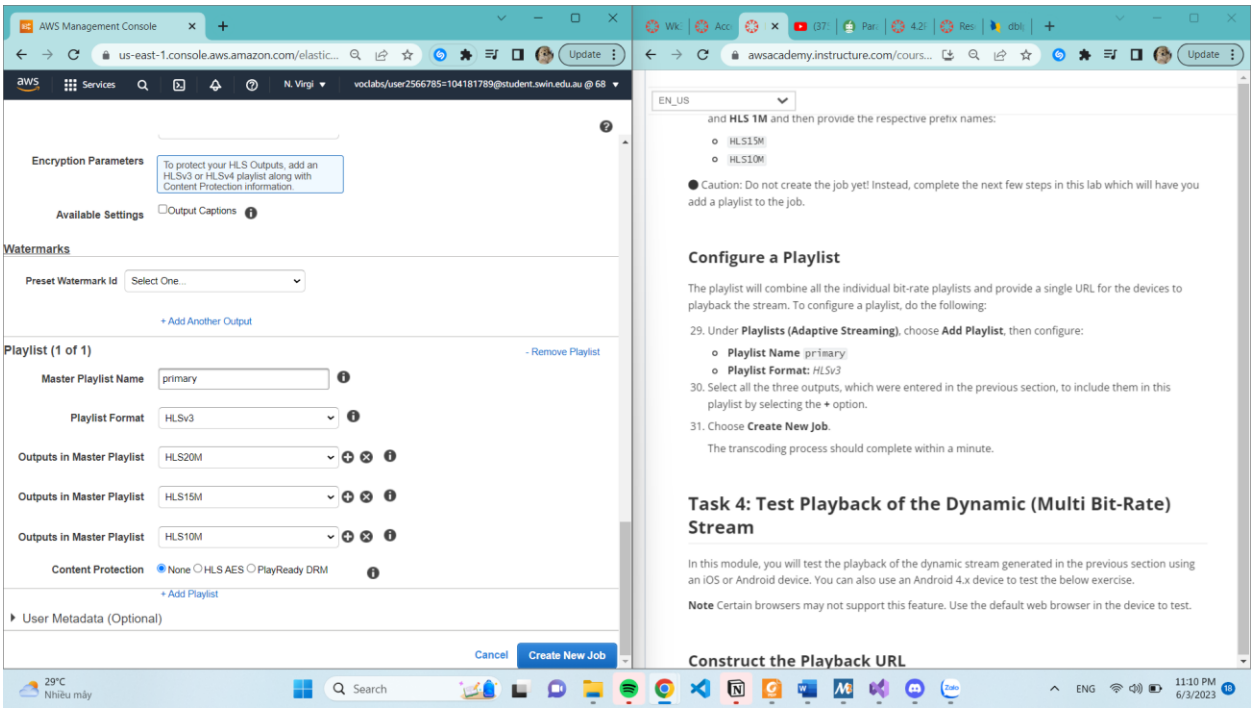

AWS Management Console
us-east-1.console.aws.amazon.com/elastic...
Update
Services
N. Virgi
voclabs/user2566785=104181789@student.swin.edu.au @ 68
Output Details (3 of 3)
- Remove Output
Preset
System preset: HLS Video - 1M
Segment Duration
10
Output Key
HLS10M
Segment Filename Preview
HLS10M00000.ts
Create Thumbnails
No
Yes
Output Rotation (Clockwise)
auto
Encryption Parameters
To protect your HLS Outputs, add an HLSv3 or HLSv4 playlist along with Content Protection information.
Available Settings
Output Captions
Watermarks
Preset Watermark Id
Select One...
+ Add Another Output
Playlists (Adaptive Streaming)
If you choose a preset for which the value of Container is TS or FMP4, this section contains information about the master playlists that you want Elastic Transcoder to create. We recommend that you create only one master playlist per streaming format.
Add Playlist
awsacademy.instructure.com/cours...
EN_US
The job does the work of transcoding the input file into multiple bit-rates as selected.
21. On the Pipelines page, choose Create New Job to create a transcoding job. You create the job in the pipeline (queue) that you want to use to transcode the video file.
22. For Pipeline, select InputPipeline.
23. For Output Key Prefix, enter output/.
Amazon Elastic Transcoder will prepend this value to the names of all files that the job will create (including output files, thumbnails, and playlists).
24. For Input Key, select the input file labeled input/AmazonS3Sample.mp4.
Configure Output Details
The settings in this section will determine how many output files (bit-rates) are created. You will configure three output files for this demo having three separate bit-rates (2Mbps, 1.5Mbps and 1Mbps). Each output bit-rate will require you to create a separate output details section. This will also output a playlist file for each bit-rate, which lists all the segments that make up the stream.
25. For Preset:, select System preset: HLS 2M
26. For Segment Duration, enter 10 (which is the HLS default).
27. For Output Key, enter the unique prefix HLS2OM to name the segments created using this preset.
28. Click + Add Another Output and repeat the steps above to generate segments for presets HLS 1.5M and HLS 1M and then provide the respective prefix names:
HLS15M
HLS10M
Caution: Do not create the job yet! Instead, complete the next few steps in this lab which will have you add a playlist to the job.
Configure a Playlist
29°C
Nhiều mây
Search
ENG
11:05 PM
6/3/2023

Configure Playlist

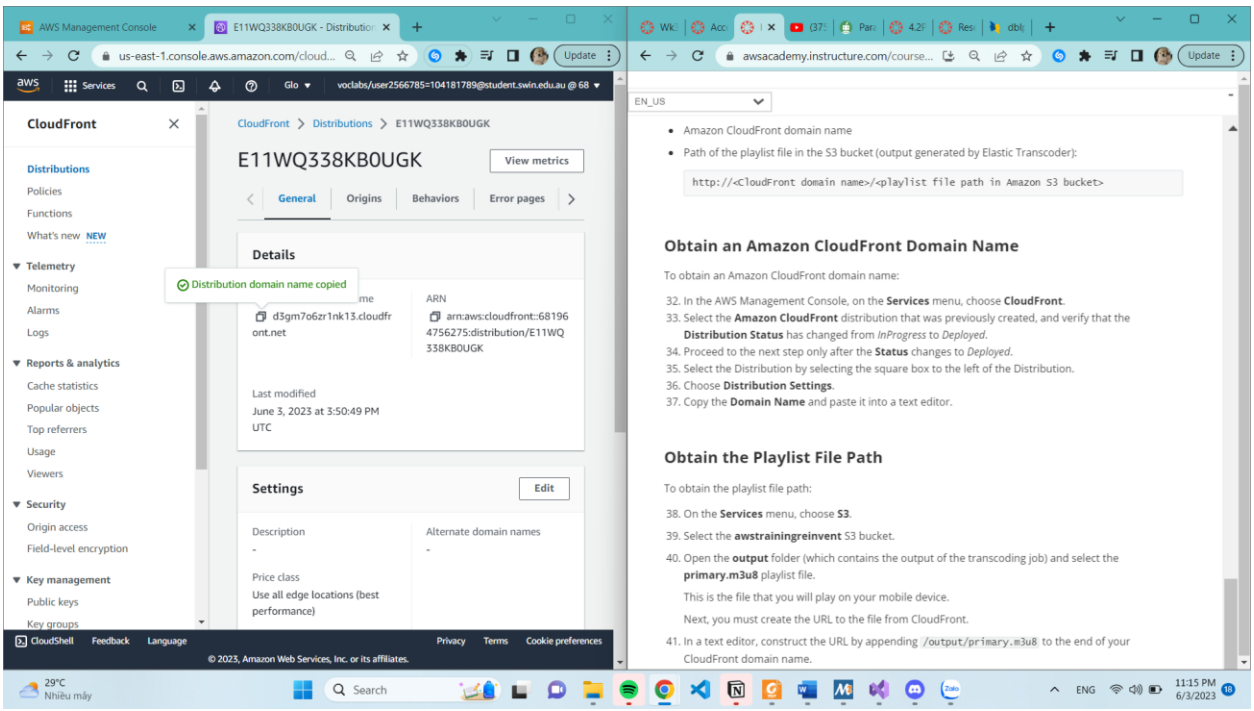
29-31

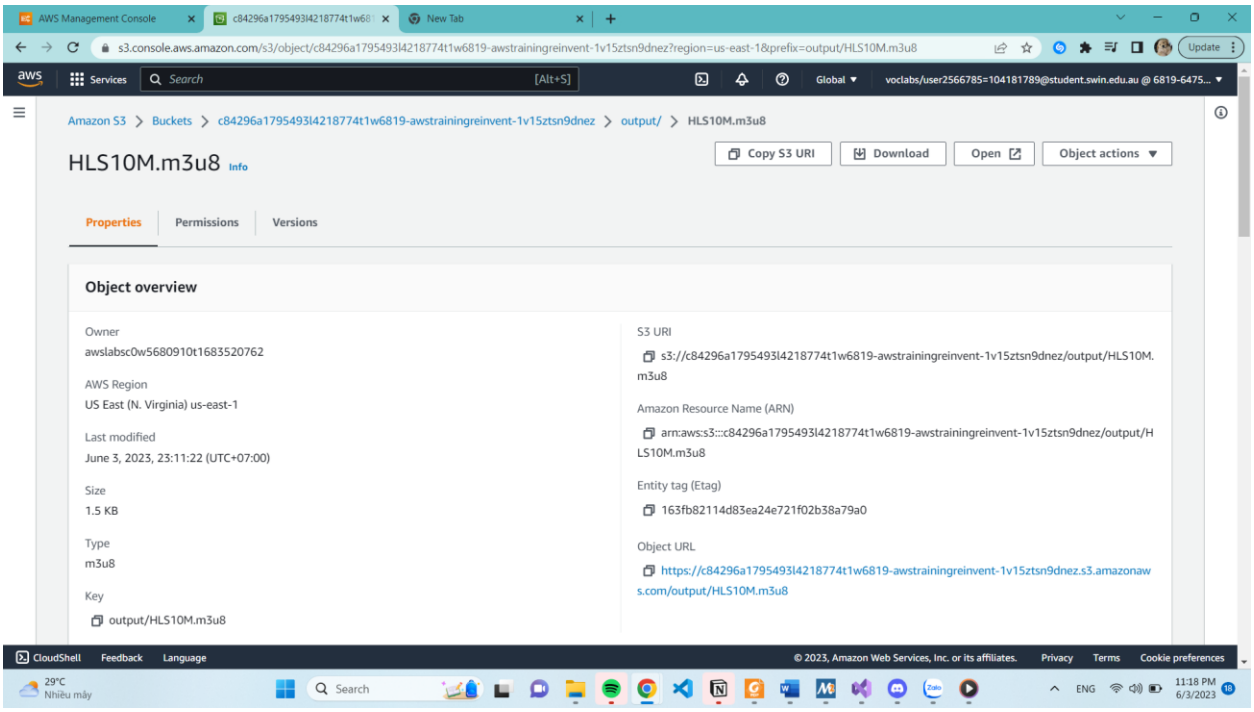
- Under **Playlists (Adaptive Streaming),** choose **Add Playlist**, then configure:
  - **Playlist Name** primary
  - **Playlist Format:** HLSv3
- Choose **Create New Job.**





Task 4: Test Playback of the Dynamic (Multi Bit-Rate) Stream





https://d3gm7o6zr1nk13.cloudfront.net/output/primary.m3u8