

Assignment Project Exam Help

Kinesreams

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ma Asharaf Beena

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What is kinesis?

1. Enables you to deal with streaming data
2. Generates insights from incoming data in seconds or minutes
3. Scalable
4. Can handle any amount

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Variants of kinesis

1. [Kinesis video stream](#): To securely stream video from connected devices to AWS.
2. [Kinesis Data Firehouse](#): Capture, transform and load data into AWS stores like data lake, data store..
3. [Kinesis Data Analytics](#): Transform and analyze streaming data in real time with Apache Flink.
4. [Kinesis Data Streams](#): C

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Kinesis Video Stream

1. Connect and stream from millions of devices
2. Durably store, encrypt, and index data - used in HW2
3. Build real-time and batch applications on data streams
4. Stream data more secure
5. Pay as you go

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How it works?

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Set up

1. Refer to the build and run sections in <https://github.com/aws-labs/amazon-kinesis-video-streams-producer-sdk-cpp>
GStreamer and JNI is NOT built by default, you MUST execute
`cmake .. -DBUILD_GSTREAMER_PLUGIN=ON -DBUILD_JNI=TRUE`
2. Create a kinesis video stream in the aws console. Use the default configuration and enter your video stream name.
https://us-east-2.console.aws.amazon.com/kinesisvideo/home?region=us-east-2#/streams/streamName/<yourv_video_stream_name>
3. cd build and execute
4. `AWS_ACCESS_KEY_ID=<your secret key> AWS_DEFAULT_REGION=us-east-2 ./kv`
`<your_video_stream_name> -w 1280 -h 720 -b`
5. Under your Media Playback session in your stream in aws console, you should be able to see the video streaming.
https://us-east-2.console.aws.amazon.com/kinesisvideo/home?region=us-east-2#/streams/streamName/<yourv_video_stream_name>

Getting current image snapshot from KVS

1. Get byte stream from KVS

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2. Write this to a file in chunks
3. Read the image from this file using cv2 library(python)

```
vidcap = cv2.VideoCapture(the_video_file_path_from_step2)
success, image = vidcap.read()
```


References

1. <https://aws.amazon.com/kinesis/video-streams/>
2. <https://docs.aws.amazon.com/kinesisvideostreams/latest/dg/what-is-kinesis-video.html>
3. <https://github.com/awslabs/amazon-kinesis-video-streams-producer-sdk-cpp>
4. <https://github.com/awslabs/amazon-kinesis-video-streams-producer-sdk-cpp/tree/master/docs>

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