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## **AWS Recommendations for Video Streaming Application**

### **Storage:**

Amazon S3 Glacier Deep Archive for long term storage of the videos but Amazon S3 Standard because we need to retrieve the videos fast, the first days.

Amazon Redshift will be used for Amazon Kinesis Firehose, because of the large amount of data that the services will output.

- *Amazon S3 Standard*: Highly durable, object storage ideal for storing large video files. Low cost per GB, ideal for storing rarely accessed historical videos.
- *Amazon S3 Glacier Deep Archive*: For exceptionally low-cost storage of videos after 30 days, when viewership drops significantly. Can take 12 hours to retrieve files.
- Amazon Redshift: Scalable data warehouse or search engine for analyzing user viewing patterns and targeting ads. Pay-per-hour based on resource usage.

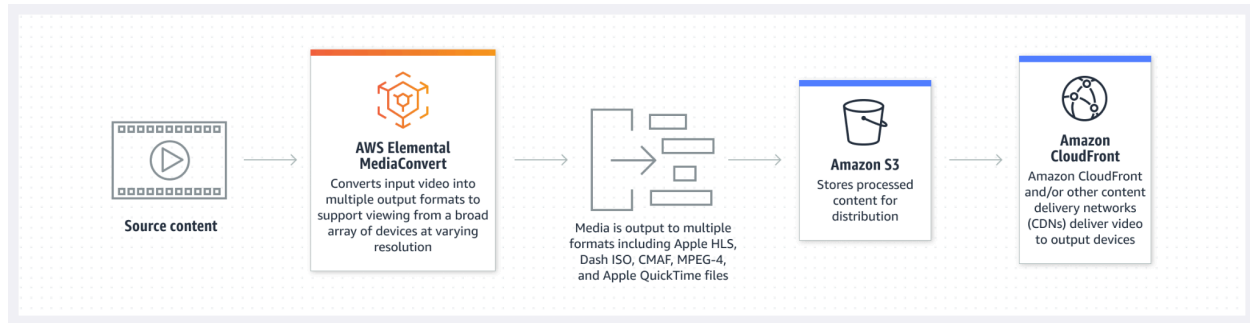
### **Content Delivery:**

This will be optional because of the amount of users that we have right now.

- Amazon CloudFront: Content delivery network (CDN) for fast video delivery globally. Pay-per-use pricing based on bandwidth and requests.

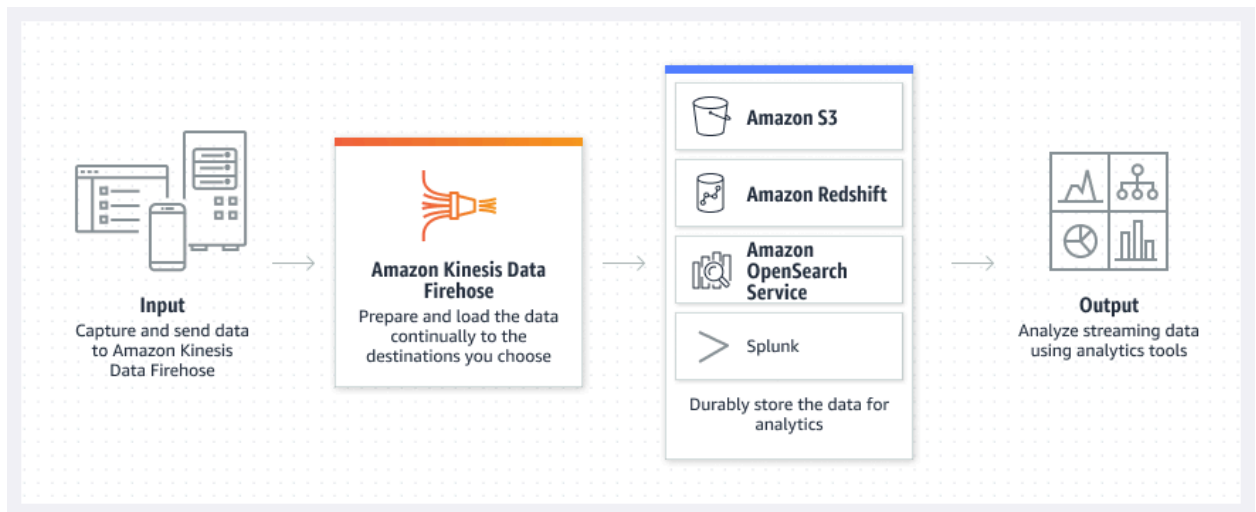
### **Encoding and transcoding:**

AWS Elemental MediaConvert: For encoding your video files into different formats and bitrates for optimal playback on various devices. Pay-per-use pricing based on minutes of video processed.



## **Analytics:**

- Amazon Kinesis Firehose: Ingest video view data into Amazon Redshift.



## **Cost Estimation:**

### **Storage:**

- S3 Standard: ~\$0.023/GB/month
  - $\$0.023(5\text{gb})(30 \text{ days}) = \$3.45$  per month
- Glacier Deep Archive: ~\$0.0032/GB/month
  - $\$0.0032(5\text{gb})(30 \text{ days})(11 \text{ months})(3 \text{ years}) = \$15.84$

## Content Delivery (Optional but recommended because of video buffering):

- CloudFront: ~\$0.11/GB/month transferred
  - \$0.11(5gb per video)(1500 for all the customers) = \$825 monthly
  - Next year \$0.11(5gb)(1650 for all the customers) = \$907.5 monthly
  - Next next year \$0.11(5gb)(1815 for all the customers) = \$998.25 monthly

## Encoding:

- Elemental MediaConvert HD convert: ~\$0.0188/minute of video processed.
  - 5gb in video minutes is 90 minutes
  - \$0.0188(90minutes) = \$1.692 per video \* 30 days because one video everyday = \$50.76

## Analytics:

- Kinesis Data Firehose: ~\$0.058/500TB of data ingested.
  - Can't determinate the data that will arrive
- Redshift: ~\$0.40/cluster-hour
  - Used to store all the data that will arrive from Kinesis Data Firehose



**Level of Service:**

We recommend starting with lower service tiers for each product. If performance testing reveals bottlenecks, it's recommended to upsize as needed based on traffic and budget.

Utilize AWS Free Tier offerings for S3 storage, CloudFront requests, and Elemental MediaConvert minutes to offset initial costs.