Amazon **M**anaged **S**treaming for Apache **K**afka
(Amazon MSK)

Amazon Managed Streaming for Apache Kafka (Amazon MSK) is a fully managed service that makes it easy to build and run applications that use Apache Kafka for streaming data

The Main Reason would be

**Simplified Kafka Management:**

**Operational Burden:** AWS MSK takes care of the provisioning, configuration, and maintenance of Apache Kafka clusters. This includes tasks like server management, software patching, and failure recovery.

**Ease of Setup:** You can quickly create Kafka clusters without worrying about the complexities of setting up and managing Kafka infrastructure.

Basic diagram
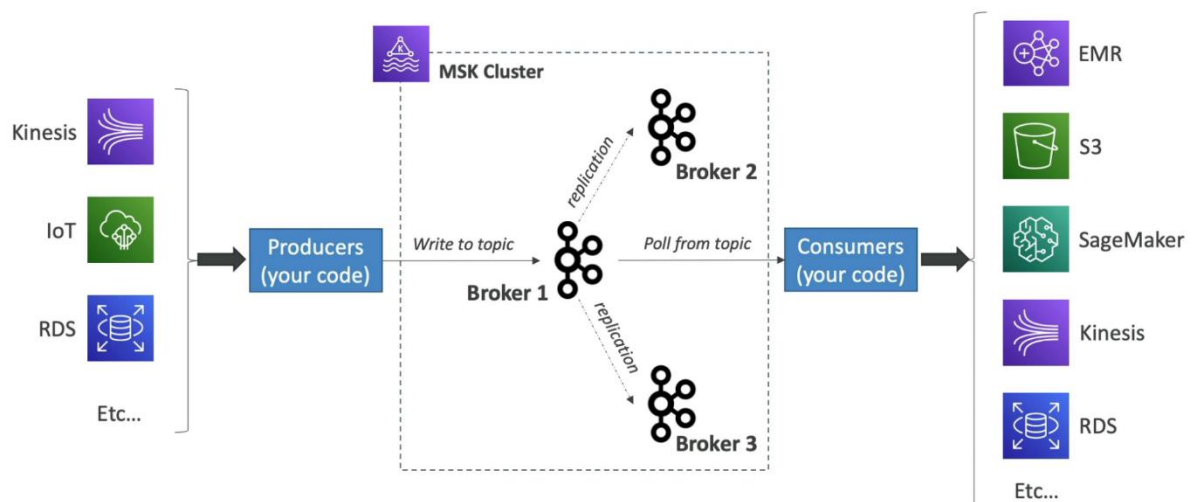
**Overall ..!!**

- Managed Apache Kafka cluster on AWS

- Used to stream data (alternative to KDS)

- Creates and **manages Kafka broker nodes and Zookeeper nodes**

- MSK cluster is deployed in the VPC (3 AZ for HA)

- Automatic recovery from common Kafka failures

- **Data is stored on EBS volumes as long as needed**

- **MSK Serverless**: auto-scaling MSK cluster without provisioning or managing capacity

- KMS for at-rest encryption

- No in-flight encryption

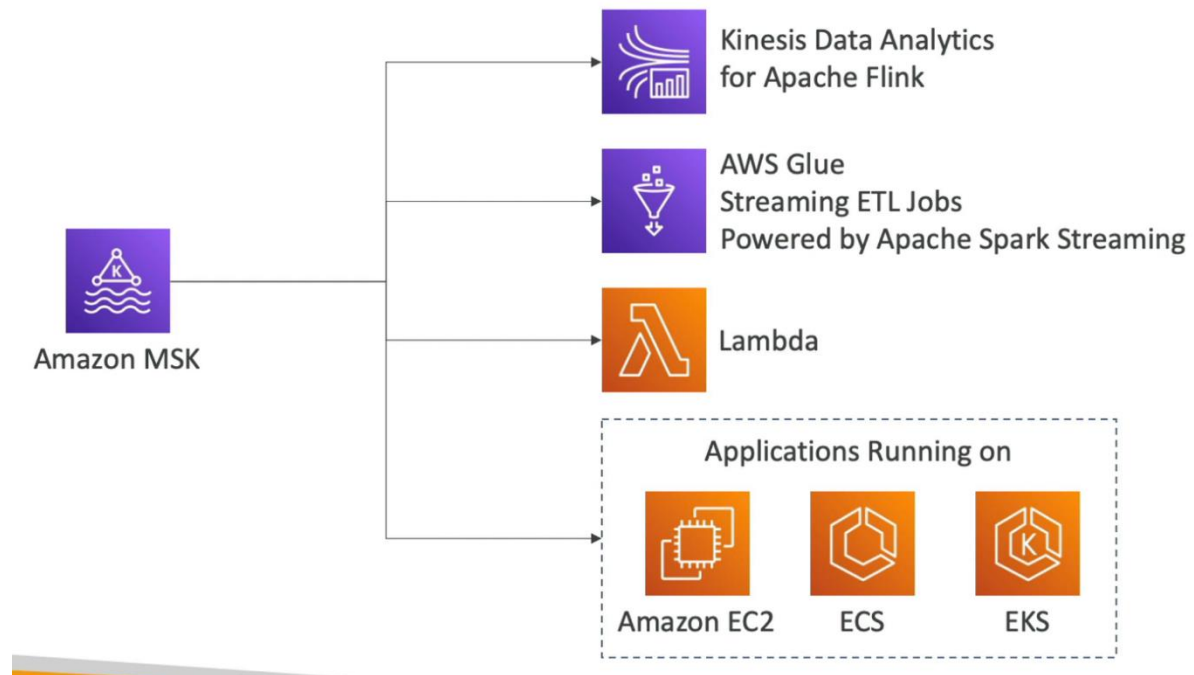We have seen the Kinesis Data Stream in the past, so why we need to take MSK or KDS …!!

**KDS vs MSK**

| KDS | MSK |
|---|---|
| 1 MB message size limit | 1 MB default (max 10 MB) |
| Uses data streams with shards | Uses Kafka topics with partitions (similar) |
| Shard splitting and merging for scaling | Partitions can only be added to a topic |
| TLS for in-flight encryption | Plaintext (no in-flight encryption) or TLS |

MSK Consumers



Questions:

https://lisireddy.medium.com/aws-msk-scenario-based-questions-0213524bb131

**Wish you the best …! Happy Learning ..!**

**Yours' Love (@lisireddy across all the platforms)**