##

AWS MSK

##

----*** Create MSK Cluster from AWS Console ***----

>> Custom Create

>> Provisioned

----*** Create IAM Role ***----

Go under IAM -->> Policies -->> Create Policy

```
{
   "Version": "2012-10-17",
   "Statement": [
      {
         "Effect": "Allow",
         "Action": [
            "kafka-cluster:Connect",
            "kafka-cluster:AlterCluster",
            "kafka-cluster:DescribeCluster"
         ],
         "Resource": [
            "arn:aws:kafka:<region>:<Account-ID>:cluster/<MSKClusterName>/*"
         ]
      },
      {
         "Effect": "Allow",
         "Action": [
            "kafka-cluster:*Topic*",
```

```
            "kafka-cluster:WriteData",
            "kafka-cluster:ReadData"
        ],
        "Resource": [
            "arn:aws:kafka:<region>:<Account-ID>:topic/<MSKClusterName>/*"
        ]
    },
    {
        "Effect": "Allow",
        "Action": [
            "kafka-cluster:AlterGroup",
            "kafka-cluster:DescribeGroup"
        ],
        "Resource": [
            "arn:aws:kafka:<region>:<Account-ID>:group/<MSKClusterName>/*"
        ]
    }
  ]
}
```

>> Create a role with above Policy

----*** Connect to MSK Cluster ***----

>>> Launch an EC2 instance and attach the above role

>>> Set up kafka client on EC2

$ sudo apt update

$ sudo apt install openjdk-11-jdk openjdk-11-jre -y

$ wget https://archive.apache.org/dist/kafka/3.5.1/kafka_2.13-3.5.1.tgz

$ tar -xzf kafka_2.13-3.5.1.tgz

$ sudo mv kafka_2.13-3.5.1 /usr/local/kafka

$ sudo chown ubuntu:ubuntu -R /usr/local/kafka/

$ nano .bashrc

export KAFKA_HOME=/usr/local/kafka
export PATH=$PATH:$KAFKA_HOME/bin
export PATH=$PATH:$KAFKA_HOME/config
export PATH=$PATH:/usr/local/kafka/bin/
export PATH=$PATH:/usr/local/kafka/config/

$ cd /usr/local/kafka/libs

$ wget https://github.com/aws/aws-msk-iam-auth/releases/download/v1.1.1/aws-msk-iam-auth-1.1.1-all.jar

$ cd ..

$ cd bin

$ nano client.properties
security.protocol=SASL_SSL
sasl.mechanism=AWS_MSK_IAM
sasl.jaas.config=software.amazon.msk.auth.iam.IAMLoginModule required;
sasl.client.callback.handler.class=software.amazon.msk.auth.iam.IAMClientCallbackHandler

----*** Work with MSK ***----

Create a Topic

$ kafka-topics.sh --create --bootstrap-server b-3.mymsk1.jsfwzo.c2.kafka.us-east-1.amazonaws.com:9098 --command-config client.properties --replication-factor 3 --partitions 1 --topic my-topic-1

(Get bootstrapserverstring from ViewClientInformation)

Run a Producer

$ kafka-console-producer.sh --broker-list b-3.mymsk1.jsfwzo.c2.kafka.us-east-1.amazonaws.com:9098 --producer.config client.properties --topic my-topic-1

Run a Consumer

$ kafka-console-consumer.sh --bootstrap-server b-3.mymsk1.jsfwzo.c2.kafka.us-east-1.amazonaws.com:9098 --consumer.config client.properties --topic my-topic-1 --from-beginning

$ kafka-topics.sh --describe --bootstrap-server b-3.mymsk1.jsfwzo.c2.kafka.us-east-1.amazonaws.com:9098 --command-config client.properties

Configure auto scaling

Properties - Auto Scaling for Storage

Create custom cluster configurations

Cluster Configuration -> Create Cluster Configuration

Add below config

log.retention.hours=168

MSK Cluster -> Cluster Configuration -> Edit
Select the config & Save

Check under Cluster Operations