#!/bin/bash

# Define Variables

GIT\_REPO="https://github.com/your-repo/your-microservice.git"

JENKINS\_URL="http://your-jenkins-url:8080"

AWS\_REGION="us-east-1"

DB\_NAME="sampledb"

DB\_USER="dbuser"

DB\_PASSWORD="dbpassword"

S3\_BUCKET="your-s3-bucket"

TERRAFORM\_DIR="./terraform"

ANSIBLE\_DIR="./ansible"

DOCKER\_COMPOSE\_FILE="./docker-compose.yml"

# 1. Set up Git

echo "Setting up Git..."

git clone $GIT\_REPO

cd your-microservice

# 2. Set up Docker

echo "Building Docker images..."

docker-compose -f $DOCKER\_COMPOSE\_FILE up --build -d

# 3. Set up Jenkins

echo "Configuring Jenkins..."

# Ensure Jenkins is running and configure your jobs via the Jenkins UI or script it using Jenkins Job DSL

# 4. Set up AWS services

echo "Setting up AWS resources..."

aws configure set region $AWS\_REGION

# Create S3 Bucket

aws s3 mb s3://$S3\_BUCKET

# Create RDS PostgreSQL Database

DB\_INSTANCE\_IDENTIFIER="mydbinstance"

aws rds create-db-instance \

--db-instance-identifier $DB\_INSTANCE\_IDENTIFIER \

--db-instance-class db.t2.micro \

--engine postgres \

--master-username $DB\_USER \

--master-user-password $DB\_PASSWORD \

--allocated-storage 20 \

--backup-retention-period 3

# 5. Set up Terraform for Infrastructure as Code

echo "Applying Terraform configuration..."

cd $TERRAFORM\_DIR

terraform init

terraform apply -auto-approve

# 6. Set up Ansible for Configuration Management

echo "Running Ansible Playbook..."

cd $ANSIBLE\_DIR

ansible-playbook playbook.yml

# 7. Set up Monitoring

echo "Setting up Monitoring Tools..."

# Instructions for Grafana and ELK/OpenSearch setup

# This can be a series of docker-compose commands or AWS service deployments.

# 8. Deploy Microservices

echo "Deploying Microservices..."

docker-compose -f $DOCKER\_COMPOSE\_FILE up -d

# 9. Verify Database Connection

echo "Verifying Database Connection..."

# Assuming one microservice connects to PostgreSQL

# You can use a script or a health check API endpoint

# Example of health check (modify as needed)

curl http://localhost:your\_service\_port/health

echo "Deployment complete!"