Working with AWS

# EC2 setup

Setup Instance

OS

=> Server Name

=> Amazon linux 2 AMI - free tier (kernel)

Instance Type: Free

=> t2.micro - free tier

Key pair (login / deploying code of this machine)

=> Create new key pair

Key pair name: YourKeyPairName

RSA:

Private key file format

.pem file

Network Settings: => EDIT

Default VPC

Subnet: 1a (Network partition)

Auto-assign public IP

Create new security group:

Continue with defaults. SSH 22 PORT importance

Needed for connecting

Continue with default configure storage.

Launch Instance

Setup on EC2 machine - Actions with EC2

ssh -i D:\\ctdata\\aws\\test-feb25.pem ec2-user@3.111.55.84

sudo su

yum update

yum install java-17-amazon-corretto-17.0.10+7-1.amzn2.1.x86\_64

java --version

Local

clean package -P dev

scp -i D:\\ctdata\\aws\\test-feb25.pem ./payment-processing-service.jar ec2-user@3.111.55.84:/home/ec2-user

AWS

chmod 777 \*

nohup java -jar -Xms100M -Xmx150M payment-processing-service.jar > processing-service.log &

# RDS Creation:

Go to RDS

1. Create database => MySQL

2. mysql 8.x

3. Free tier

4. admin / <pwd>

5. public ip

Application Changes to point to that DB

DB URL

Build maven

Deploy on EC2.

Start service and test.

# AWS Secret Manager

Create a secret:

dev/payment-processing-service

AWS actions for secret manager

Search & launch AWS 'Secrets Manager'

=> Store a new Secret

=>Choose secret type:

Other type of secret

aws/secretsmanager

=> put the key & value

spring.datasource.password

cptraining

=> Configure secret

secret name: dev/payment-validation-service

=> Configure rotation - optional

Defaults (next)

=> Store

Launch config & Secret value

Check if the secret manager is accessible from the machine:

aws secretsmanager get-secret-value --secret-id dev/payment-processing-service --region ap-south-1

->

Unable to locate credentials. You can configure credentials by running "aws configure".

IAMRole setting: EC2 to SecretManager

Machine should be configured to have access to this secret store.

(Configure IAM role)

On EC2 instance => security we can see IAM Role assigned.

Instance => Action => Security => Modify IAM Role

Create New IAM Rule => new page

=> Create role

Step1

=> AWS Service

Service or usecase: EC2

=> Next

=> Permission policies

SecretsManagerReadWrite

=> Next

=> Give name, create create

Instance => Action => Security => Modify IAM Role

=> Choose this newly created IAMRole and update

From EC2, check the command again.

aws secretsmanager get-secret-value --secret-id dev/payment-processing-service --region ap-south-1

**Application Side Changes:**

application-dev.properties

1. Remove/comment the password

a. spring.datasource.password

2. Add below in dev property file

a. spring.config.import=aws-secretsmanager:dev/payment-processing-service

3. In Pom, add below config

<dependency>

<groupId>io.awspring.cloud</groupId>

<artifactId>spring-cloud-starter-aws-secrets-manager-config</artifactId>

<version>2.4.2</version>

</dependency>

Build, deploy, test on AWS

mvn clean package -P dev

scp -i D:\\MyData\\CT\\AWS\\keypair.pem ./payment-validation-service.jar ec2-user@13.201.69.117:/home/ec2-user

Kill existing

ps -ef | grep java

Kill -9 pid

nohup java -jar -Xms100M -Xmx150M payment-validation-service.jar > validation-service.log &

ps -ef | grep java