AWS Project

Overview:

- This is a **hands-on**, open-web exercise that can be used to test candidates with varying levels of understanding on AWS

- The candidate will have full access to the Internet.

Objectives:

- This exercise is not some random/contrived problem.

- This is intended to be a pragmatic, real-world challenge that the candidate may well encounter as part of their routine, day-to-day DevOps work.

Task:

Part 1:

1. Create VPC
2. Create 2 Subnets [1-Public, 1-Private]
3. Create Route Table [1-Public and 1-Private]
4. Create Internet Gateway
5. Create NAT Gateway
6. Add Routes in the Route Tables to Private and Public subnets

Part 2:

1. Create a Bastion / Jump Host [ec2 Instance] with public IP which will be used to login into all the other ec2 instances
2. Create a Auto Scaling Group with desired 1 and minimum 1 maximum 3 ec2 instances
3. Auto scaling group instances should have Apache web server installed
4. Install NFS packages
5. All ec2 instance under ASG should automatically mount EFS volume once running
6. Create a EC2 instance in private subnet with Internet connectivity

7. Create a MySQL RDS instance with single AZ setup [Free tire]
8. ASG Ec2 instances should have connectivity to RDS on port 3306

Part 3:

1. Create a Application Load balancer and attach the ASG to it
2. When we hit the LB url Apache web page should be displayed
3. Create a CloudFront Distribution and add LB as the endpoint to it
4. When we hit the CloudFront Distribution url Apache web page should be displayed

Part 4:

1. Create a S3 Bucket with static website hosting
2. Create a AWS Lambda
3. When there is any action like (put, update, delete) is performed on the S3 Bucket Lambda should be triggered
4. Create a SNS
5. Add Email as subscriber to the SNS
6. Lambda should publish the file name along with the action performed to the SNS
7. User should receive the email for s3 bucket object related tasks