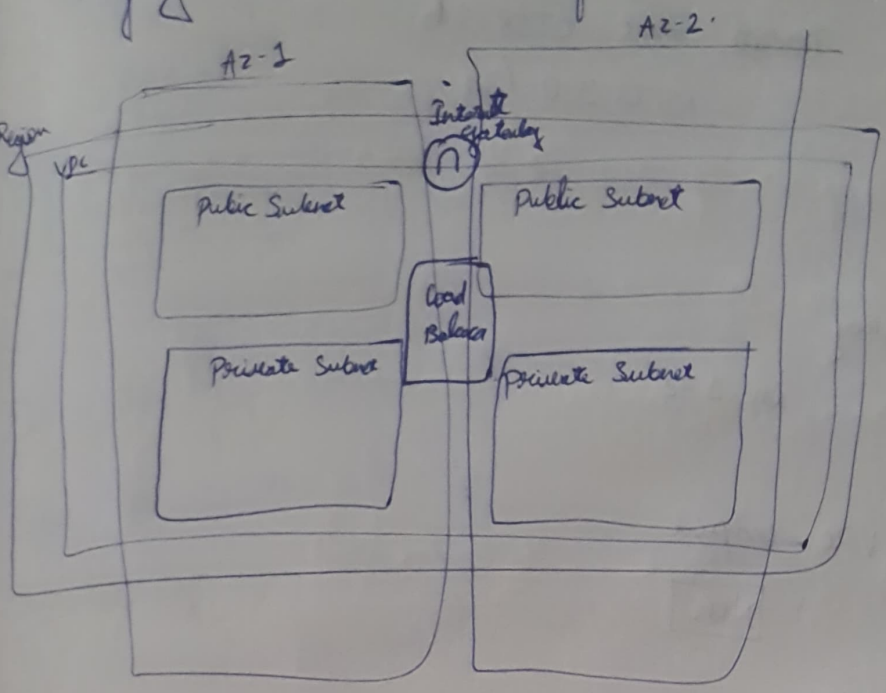
Lab:

Auto Scaling

Highly available, elastic, fault tolerant infrastructure



Create a VPC

VPC Setting

- VPC & more
- Name: EGOM-VPC
- CIDR (10.0.0.0/16)
- No. of AZ - (2)
- No. of public Subnets - (2)
- No. of private Subnets - (2)
- CIDR

Public Subnet CIDR 1a

10.0.0.0/24

Public Subnet CIDR 1b

10.0.2.0/24

Private Subnet CIDR 1a
10.0.1.0/24

Private Subnet CIDR 1b
10.0.3.0/24

- NAT gateway
in 1 AZ

- VPC. endpoint
None

Create VPC

Create AMI of My Site in EC2.

Name: myWebServer

Network Setting

choos vpc - myvpc

Subnet - public1 - 1a

Public Ip address - Enable

Create Security group add rule

Type - HTTP

Source - 0.0.0/0

7) Type - SSH
Source - 0.0.0.0/0

Storage
8gb

Launch Instance

Do ssh from terminal to EC2.

Before ssh do this 1 step

Copy the Project folder to EC2

$ scp -i Downloads/some.pem -r html-paradise-project ubuntu@<IP>:/home/ubuntu/

Now,
$ ssh -i some.pem ubuntu@<IP>

Entered EC2

In EC2
$ sudo apt-get update && sudo apt-get install apache2

Rename
$ sudo mv html-paradise-project/ myapp/

$ sudo cp -rf myapp/ /var/www/html/.

$ cd /var/www/html/

$ ls
(We should see our myapp folder)

$ sudo nano /etc/apache2/sites-available/000-default.conf

DocumentRoot /var/www/html/myapp

$ Sudo systemctl restart apache2

Check in Browser by putting <IP of EC2>
we should see website (static website)

Take Snapshot of EC2 to make it as template

AWS -> Instances -> Select Instance -> Actions -> Create Image & Temp

Ami
name: ecomami

Add tag : Name : Myecomami

Create

We can see it in AMI in EC2 Section

Create Target group

EC2 -> scroll down to Target group

-> Instances

-> Target group name : ecomtargetgroup

Protocol : port 80

-> VPC : myVPC

-> protocol version : HTTP1

-> Health check : HTTP

Next

Register targets

Let's register targets later

Skip Now

Create target group

In EC2 → Load Balancer → Create

Select → application load Balancer

load balancer name : my ecom elb

Scheme : internet-facing

address : IPv4

VPC : my VPC

Mappings : check both AZ

- choose public1 - 1a
- choose public2 - 1b

Security group : Select created security group

In that

allow HTTP - port:80

from anywhere

Listeners & routing

protocol - HTTP , port - 80

Default action → select target group i.e., myecomtargetgp

Create

EC2 → scroll down if left tab → launch templates

launch template name: Myecom launch template

App OS Images Section

- My AMI Section
- AMI select → ecomami

Instance type - t2.micro

Network key pair - select

Network - myvpc → private Subnet

Subnet - private1 - 1a

Security group - myelb Security grop

Tags - Name: myecom web

Create launch template

~~in launch template dashboard~~

~~Action →~~

EC2 → Scroll down to left tab → Auto Scaling

Auto scaling group Name : ecom-asg

Launch template : my-ecom-launch-template (Select)

Network : ~~my vpc~~

VPC : my vpc

Subnet : private 1 - 1a

private 1 - 1b

load balancing :

Attach existing load balancer

~~Choose to create~~

Choose from load balancer target groups

Select → my-ecom-target-group

Health checks :

☑ Turn on ELB health checks

grace period : 120 seconds

Additional Settings

☑ Enable group metrics collection with cloudwatch

group size

Desired : 2

Minimum : 2

Maximum : 4

Scaling policies

◉ Target Tracking Scaling policy

Metric type : CPU utilization

Target value : 40

Instance warmup : 60 seconds

Tag : Name : mycomweb

Create AutoScaling group