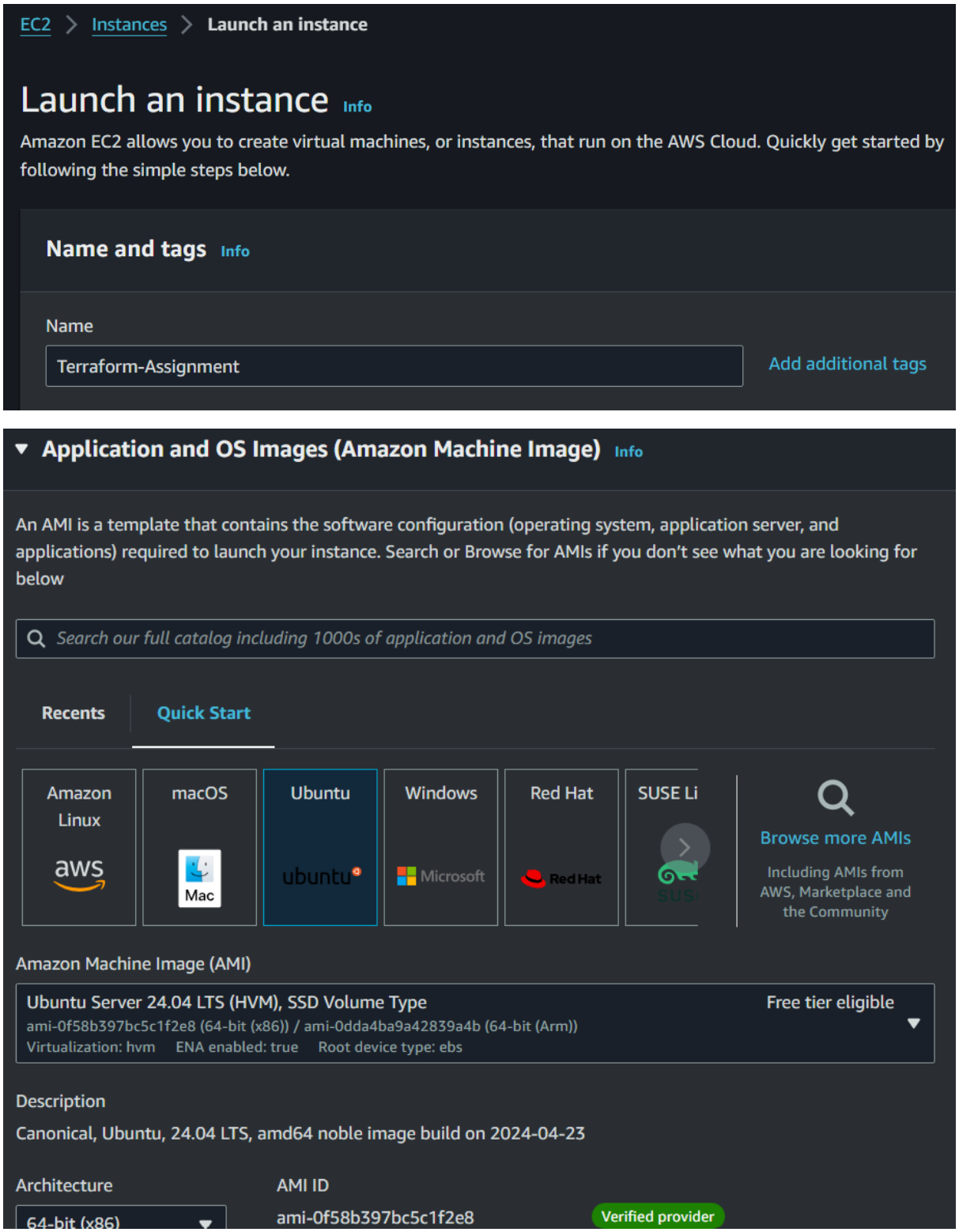
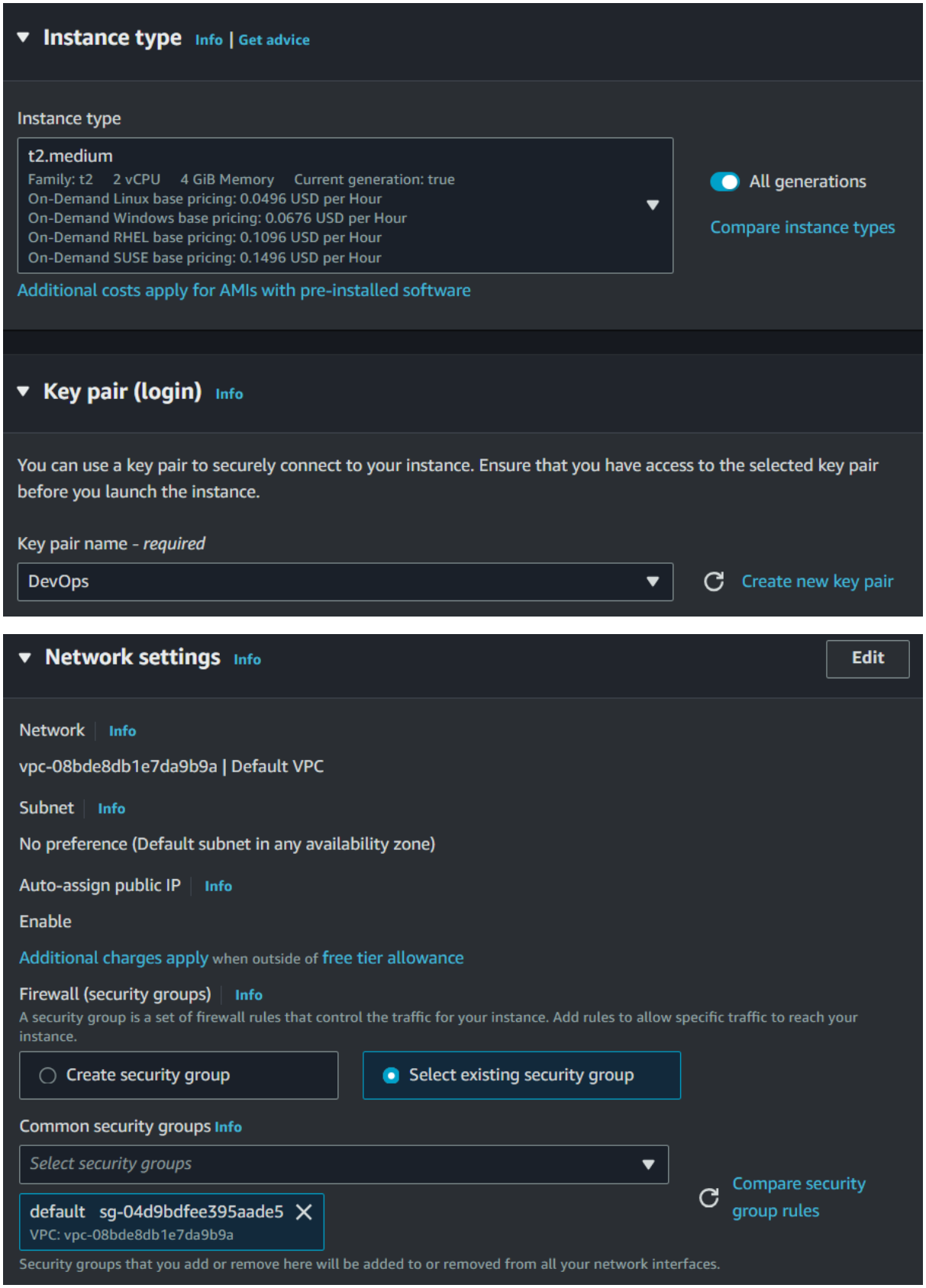
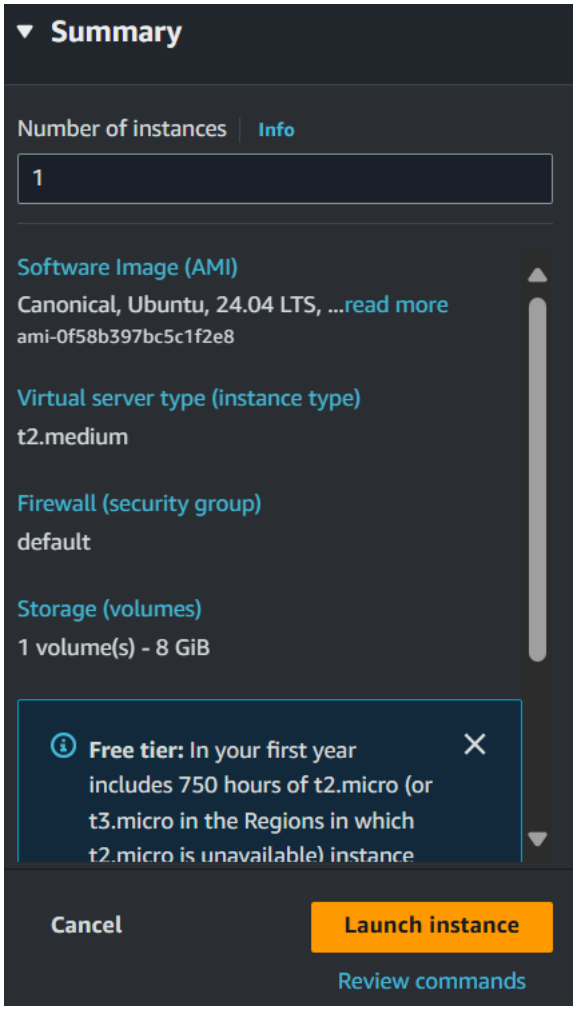
Terraform Assignment - 1

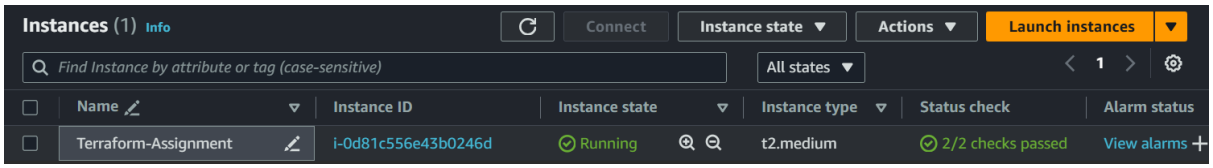
You have been asked to:

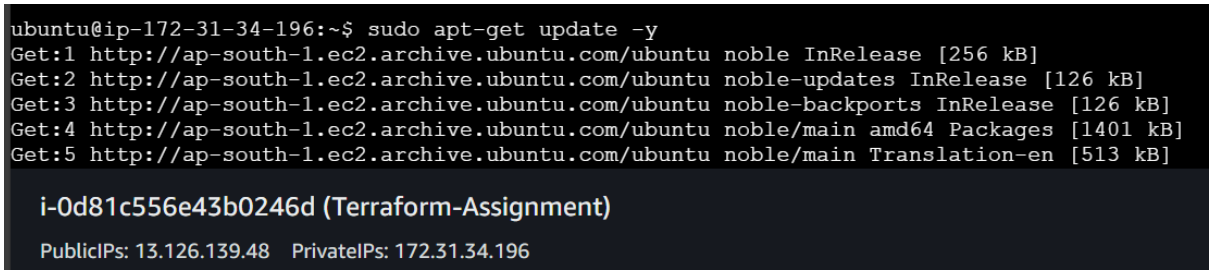
- Create an EC2 service in the default subnet in the ohio region




Instance type Info | Get advice
Instance type
t2.medium
Family: t2 2 vCPU 4 GiB Memory Current generation: true
On-Demand Linux base pricing: 0.0496 USD per Hour
On-Demand Windows base pricing: 0.0676 USD per Hour
On-Demand RHEL base pricing: 0.1096 USD per Hour
On-Demand SUSE base pricing: 0.1496 USD per Hour
All generations
Compare instance types
Additional costs apply for AMIs with pre-installed software
Key pair (login) Info
You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.
Key pair name - required
DevOps
Create new key pair
Network settings Info
Edit
Network Info
vpc-08bde8db1e7da9b9a | Default VPC
Subnet Info
No preference (Default subnet in any availability zone)
Auto-assign public IP Info
Enable
Additional charges apply when outside of free tier allowance
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
Common security groups Info
Select security groups
default sg-04d9bdfee395aade5
VPC: vpc-08bde8db1e7da9b9a
Compare security group rules
Security groups that you add or remove here will be added to or removed from all your network interfaces.







Installing Terraform

wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyring.gpg

echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb_release -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list

sudo apt update && sudo apt install terraform

```
ubuntu@ip-172-31-34-196:~$ terraform --version
Terraform v1.8.4
on linux_amd64
ubuntu@ip-172-31-34-196:~$
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

Install AWS CLI

```
ubuntu@ip-172-31-34-196:~$ sudo apt install unzip -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  zip
The following NEW packages will be installed:
  unzip
```

i-0d81c556e43b0246d (Terraform-Assignment)

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curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"

unzip awscliv2.zip

sudo ./aws/install

```
ubuntu@ip-172-31-34-196:~$ curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100 57.8M  100 57.8M    0     0   121M      0 --:--:-- --:--:-- --:--:--  121M
ubuntu@ip-172-31-34-196:~$
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

```
ubuntu@ip-172-31-34-196:~$ ls
aws  awscliv2.zip
ubuntu@ip-172-31-34-196:~$
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

```
ubuntu@ip-172-31-34-196:~$ ls
aws  awscliv2.zip
ubuntu@ip-172-31-34-196:~$ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
ubuntu@ip-172-31-34-196:~$ /usr/local/bin/aws --version
aws-cli/2.15.62 Python/3.11.8 Linux/6.8.0-1008-aws exe/x86_64.ubuntu.24
ubuntu@ip-172-31-34-196:~$
```

i-0d81c556e43b0246d (Terraform-Assignment)

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Setting AWS CLI Config

```
ubuntu@ip-172-31-34-196:~$ aws configure
AWS Access Key ID [None]: AKIARPFRXAWSGACDTUNL
AWS Secret Access Key [None]: sxRmeNNRZdhMey2yu0J0zYY+O4ZKtChNXXXxE3Ef
Default region name [None]:
Default output format [None]:
ubuntu@ip-172-31-34-196:~$
```

i-0d81c556e43b0246d (Terraform-Assignment)

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Verify AWS Config setup

```
ubuntu@ip-172-31-34-196:~$ aws sts get-caller-identity
{
    "UserId": "101304436132",
    "Account": "101304436132",
    "Arn": "arn:aws:iam::101304436132:root"
}
ubuntu@ip-172-31-34-196:~$
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

Writing Terraform script to launch an EC2 in Ohio region

```
provider "aws" {
  region = "us-east-2"
}

resource "aws_instance" "instance1" {
  ami = "ami-09040d770ffe2224f"
```

```
 instance_type = "t2.micro"

 tags = {

   Name = "terraform-instance"

 }

}
```

```
ubuntu@ip-172-31-34-196:~/assignment1$ vi main.tf
ubuntu@ip-172-31-34-196:~/assignment1$ cat main.tf
provider "aws" {
  region = "us-east-2"
}

resource "aws_instance" "instance1" {
  ami = "ami-09040d770ffe2224f"
  instance_type = "t2.micro"
  tags = {
    Name = "terraform-instance"
  }
}

ubuntu@ip-172-31-34-196:~/assignment1$
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

```
ubuntu@ip-172-31-34-196:~/assignment1$ terraform init

Initializing the backend...

Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v5.52.0...
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

```
ubuntu@ip-172-31-34-196:~/assignment1$ terraform plan

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following
symbols:
  + create

Terraform will perform the following actions:

  # aws_instance.instance1 will be created
  + resource "aws_instance" "instance1" {
      + ami                                  = " ami-09040d770ffe2224f"
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

```
ubuntu@ip-172-31-34-196:~/assignment1$ terraform apply

Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following
symbols:
  + create

Terraform will perform the following actions:
```

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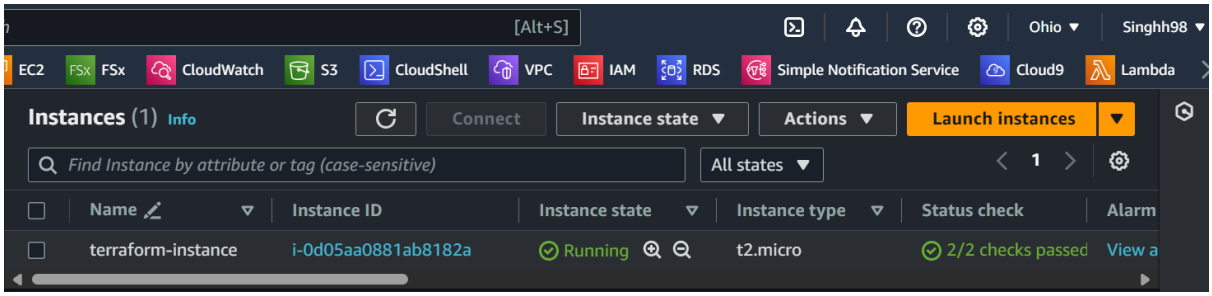
```
Do you want to perform these actions?
  Terraform will perform the actions described above.
  Only 'yes' will be accepted to approve.

  Enter a value: yes

aws_instance.instance1: Creating...
aws_instance.instance1: Still creating... [10s elapsed]
aws_instance.instance1: Still creating... [20s elapsed]
aws_instance.instance1: Still creating... [30s elapsed]
aws_instance.instance1: Creation complete after 35s [id=i-0d05aa0881ab8182a]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
ubuntu@ip-172-31-34-196:~/assignment1$
```

i-0d81c556e43b0246d (Terraform-Assignment)

PublicIPs: 13.126.139.48 PrivateIPs: 172.31.34.196

Now we could see that the instance has been launched in ohio region.



********** THE END **********