**UNIVERSITY OF PETROLEUM**

**AND ENERGY STUDIES**

**Assignment-1**

**SPCM**

**Submitted To-**

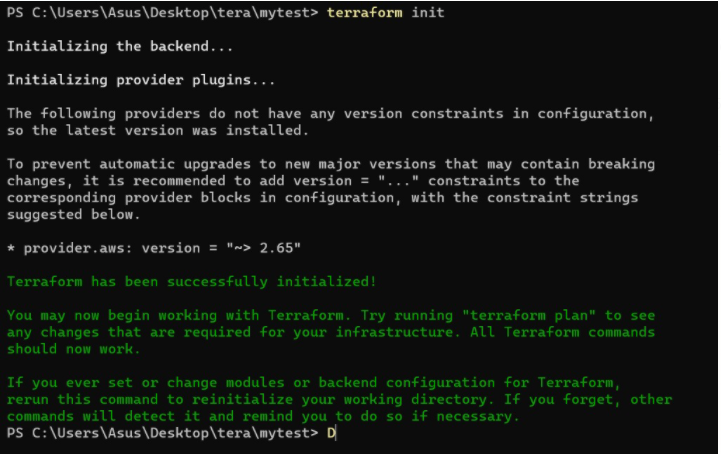
**Hitesh Kumar Sharma**

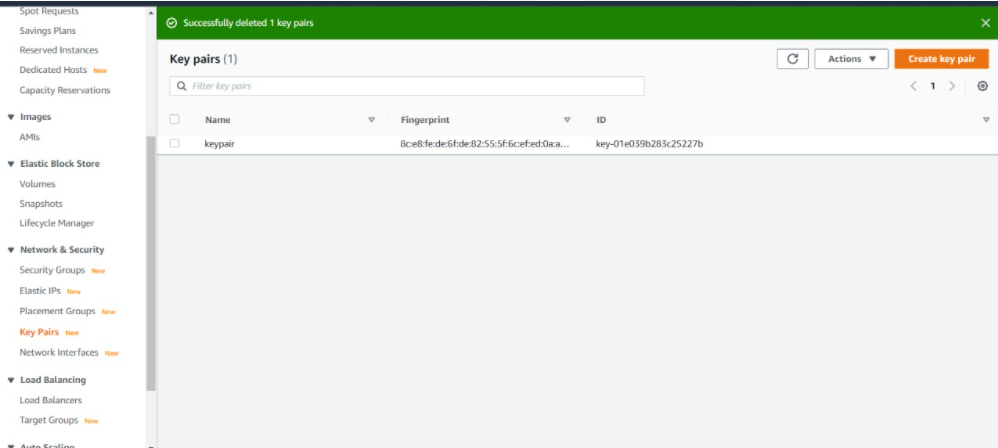
**Submitted by – ASEEM GOEL**

**Sap-Id 500062226**

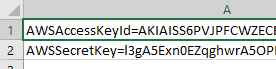
**B.TECH-CSE-DEVOPS**

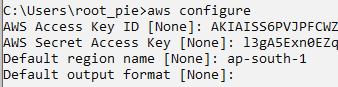
Steps:

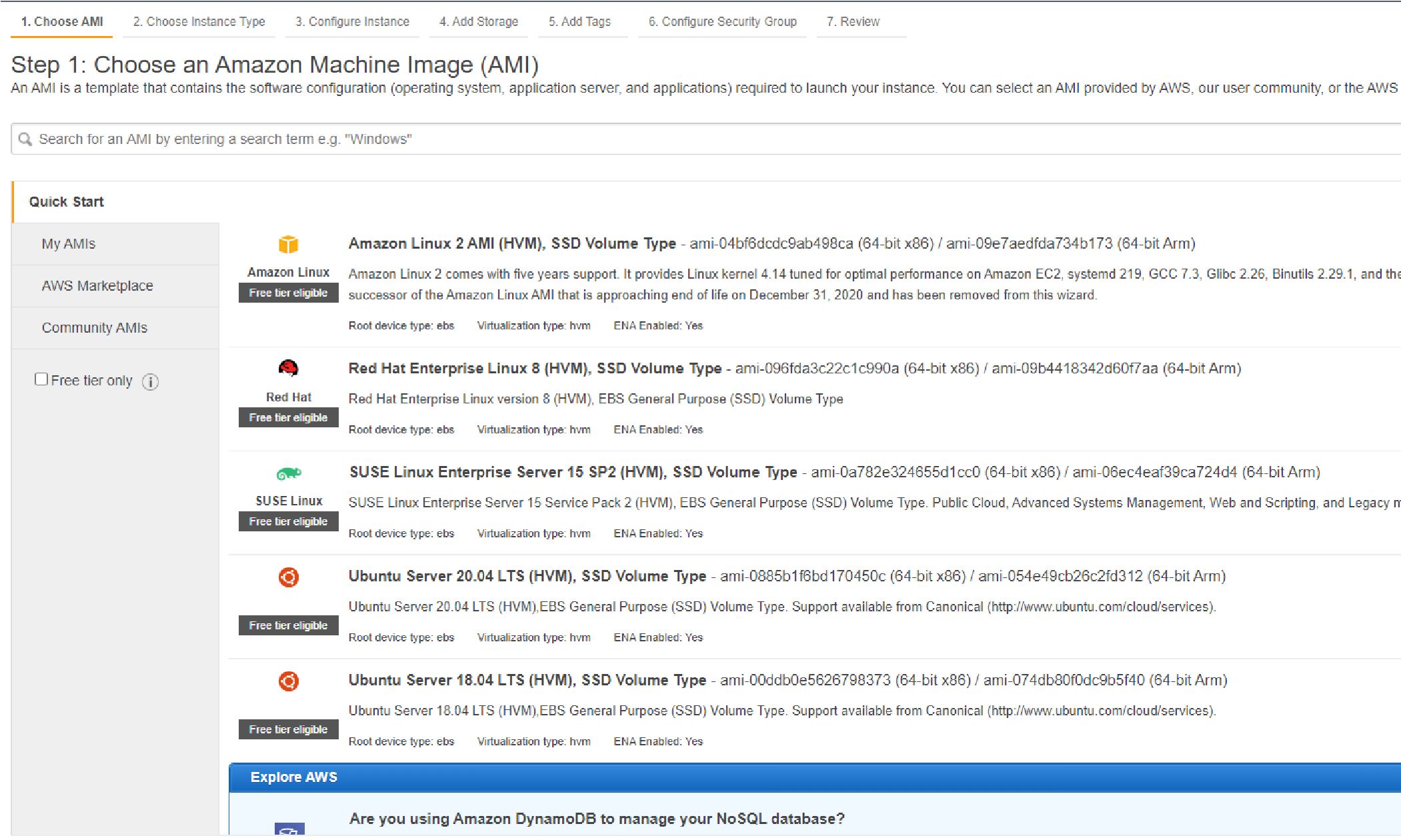
1. First create a directory project-terraform and initialise terraform which is installed on your system by following command: Terraform init



1. Now, create a file using vim which is will connect to aws and has the access and security key credenitials which you have downloaded and enter your region:





1. Then using vim create a file in terraform with .tf extension and add below commands and set the ami from the screen as shown below amd set the instance type as t2 micro and key\_name.

In this file, we add resources like instance creation, vpn and S3 bucket. All these steps to create these 3 added in this file.

provider "aws" {

region= "ap-south-1"

profile= "aseem goel"

}

resource "aws\_instance" "myFirstInstance" {

ami = "ami-0db0b3ab7df22e366"

count=2

key\_name = "keypair"

instance\_type = "t2.micro"

security\_groups= [ "security\_jenkins\_port"]

tags= {

Name = "jenkins\_instance"

}

}

resource "aws\_s3\_bucket" "tf\_course" {

bucket = "ilovedevops987"

acl = "private"

}

resource "aws\_vpc" "vpc" {

cidr\_block = "10.0.0.0/16"

}

resource "aws\_vpn\_gateway" "vpn\_gateway" {

vpc\_id = aws\_vpc.vpc.id

}

resource "aws\_customer\_gateway" "customer\_gateway" {

bgp\_asn = 65000

ip\_address = "172.0.0.1"

type = "ipsec.1"

}

resource "aws\_vpn\_connection" "main" {

vpn\_gateway\_id = aws\_vpn\_gateway.vpn\_gateway.id

customer\_gateway\_id = aws\_customer\_gateway.customer\_gateway.id

type = "ipsec.1"

static\_routes\_only = true

}

resource "aws\_security\_group" "security\_jenkins\_port" {

name = "security\_jenkins\_port"

description = "security group for jenkins"

ingress {

from\_port = 8080

to\_port = 8080

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

}

ingress {

from\_port = 22

to\_port = 22

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

}

# outbound from jenkis server

egress {

from\_port = 0

to\_port = 65535

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

}

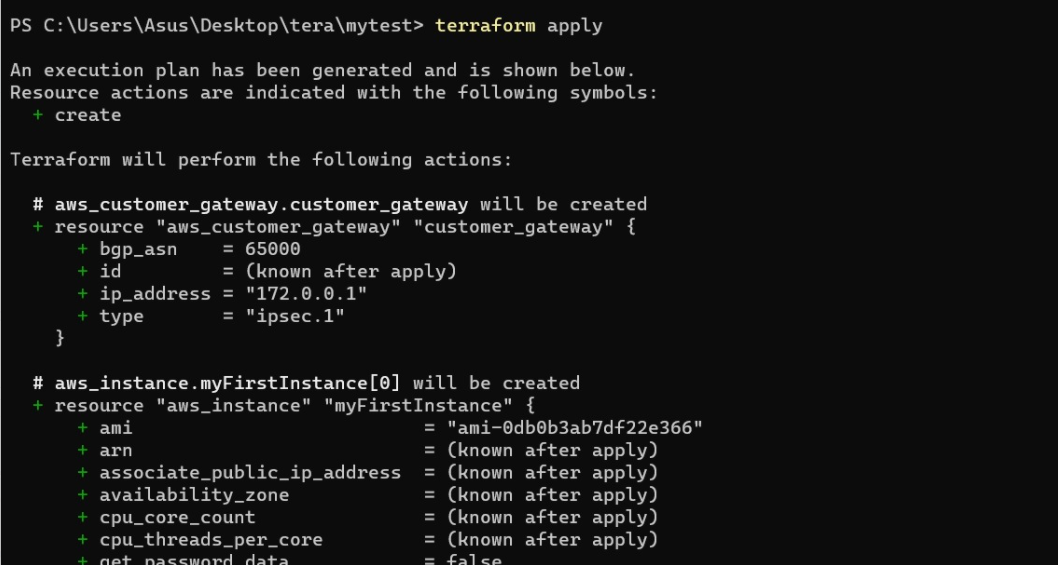
tags= {

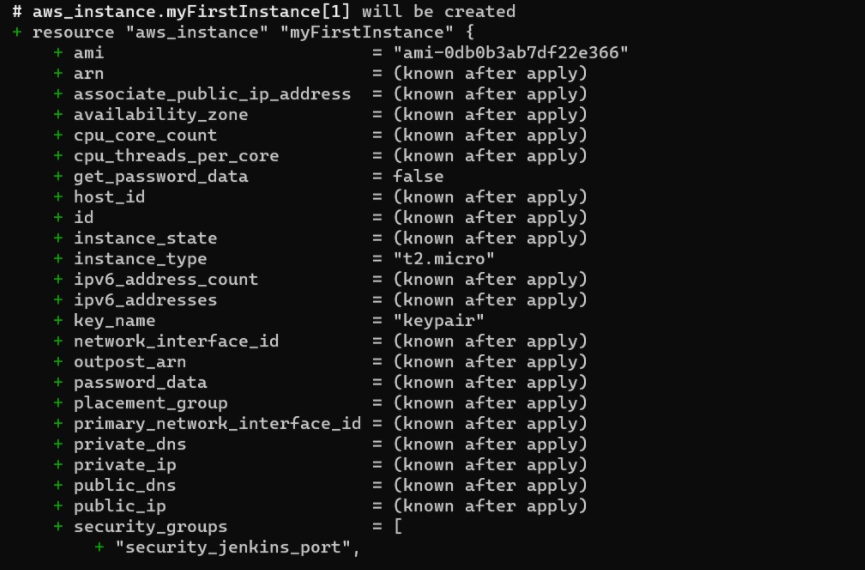
Name = "security\_jenkins\_port"

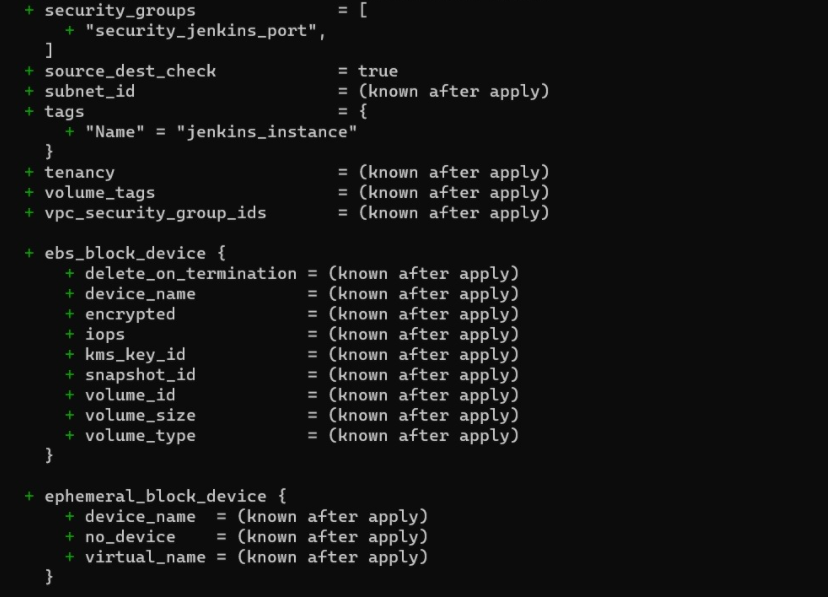
}

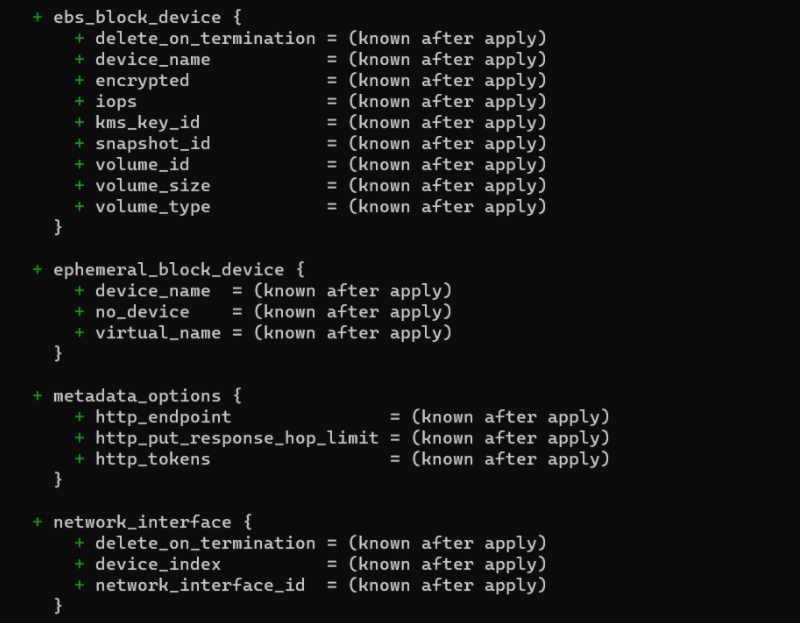
}

1. Now Apply, terraform apply command through which the script will run:

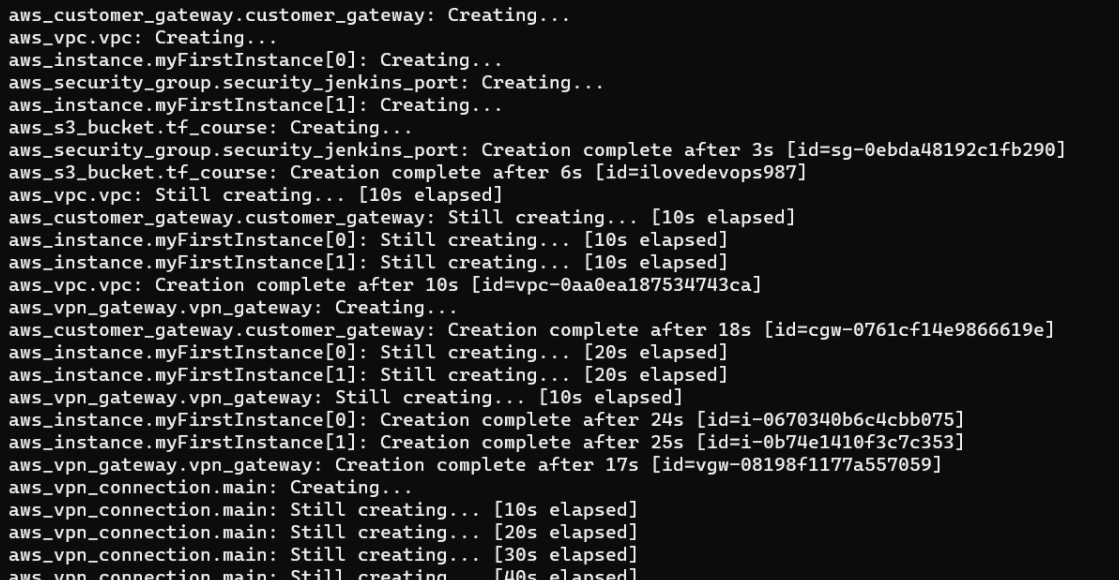








1. Some resourcs are created and some are still in process as shown below



1. Now, You can visit your aws management console and see 2 EC2 instances have been created , VPN is created and S3 bucket is also created:

