SubmittedBy:Vedansh Singhal Submitted To:Mr.Hitesh Kumar Sharmasir SapID:500061440 RollNo:R171217060 Devops2017-2021 Batch B2

System Provisioning And Configuration Managment Assignment -1

Write Terraform script to do perform following tasks on AWS cloud Platform

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

Terraform init

```
Initializing the backend...

Initializing provider plugins...

The following providers do not have any version constraints in configuration, so the latest version was installed.

To prevent automatic upgrades to new major versions that may contain breaking changes, it is recommended to add version = "..." constraints to the corresponding provider blocks in configuration, with the constraint strings suggested below.

* provider.aws: version = "~> 3.16"

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see any changes that are required for your infrastructure. All Terraform commands should now work.

If you ever set or change modules or backend configuration for Terraform, rerun this command to reinitialize your working directory. If you forget, other commands will detect it and remind you to do so if necessary.
```

Step 1: Create two T2 Micro EC2 Instances.

Step2: Create a VPN on AWS

Step 3: Create a S3 Bucket

Then using notepad 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 as "os1":

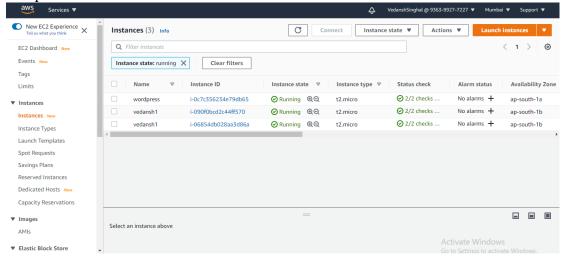
```
spcm060 - Notepad
File Edit Format View Help
provider "aws"{
region="ap-south-1"
profile="VedanshSinghal"
resource "aws_security_group" "secgrp" {
           = "secgrp"
 description = "Security for instance"
 ingress {
  from_port = 443
  to_port = 443
  protocol = "tcp"
  cidr_blocks = ["0.0.0.0/0"]
ingress {
  from_port = 80
  to_port = 80
  protocol = "tcp"
  cidr_blocks = ["0.0.0.0/0"]
spcm060 - Notepad
File Edit Format View Help
  cidr_blocks = ["0.0.0.0/0"]
ingress {
  from_port = 80
  to_port = 80
  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"]
 egress {
  from_port = 0
  to_port = 0
  protocol = "-1"
  cidr_blocks = ["0.0.0.0/0"]
```

```
spcm060 - Notepad
File Edit Format View Help
 protocol = "tcp"
  cidr_blocks = ["0.0.0.0/0"]
 egress {
  from_port = 0
  to_port = 0
  protocol = "-1"
  cidr_blocks = ["0.0.0.0/0"]
 }
}
resource "aws_instance" "singhal" {
         = "ami-0a9d27a9f4f5c0efc"
count=2
 instance_type = "t2.micro"
key_name ="os1"
spcm060 - Notepad
File Edit Format View Help
security_groups=["${aws_security_group.secgrp.name}"]
 Name = "vedansh1"
 }
}
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"
 _ ":---- 4 "
```

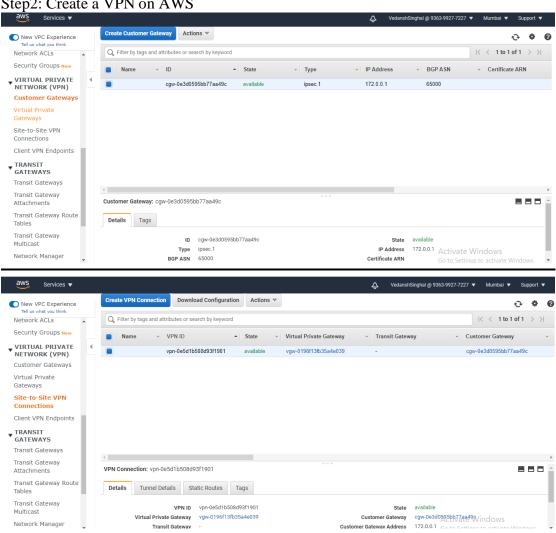
```
spcm060 - Notepad
File Edit Format View Help
 vpc_id = aws_vpc.vpc.id
resource "aws_customer_gateway" "customer_gateway" {
 bgp_asn = 65000
ip_address = "172.0.0.1"
 type
        = "ipsec.1"
}
resource "aws_vpn_connection" "main" {
 vpn_gateway_id = aws_vpn_gateway.vpn_gateway.id
 customer_gateway_id = aws_customer_gateway.customer_gateway.id
            = "ipsec.1"
 type
 static_routes_only = true
resource "aws_s3_bucket" "singhal" {
bucket="vedansh"
acl ="public-read"
}
```

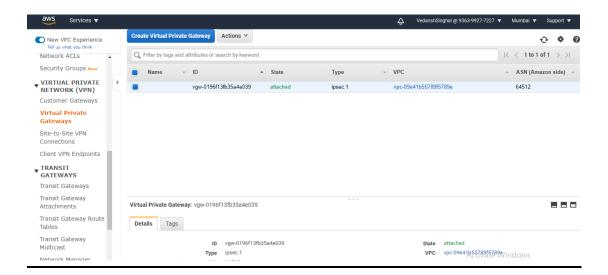
```
aws_customer_gateway.customer_gateway: Creating...
aws_cyc.vpc. Creating...
aws_sg_buckt.singhai! creating...
aws_security_group.secgrp: Creating...
aws_security_group.secgrp: Creating...
aws_security_group.secgrp: Creating...
aws_security_group.secgrp: Creating...
aws_instance.singhai[1]: Creating...
aws_instance.singhai[1]: Creating...
aws_instance.singhai[1]: Creating...
aws_vpc.vpc: Creation complete after 4s [id=vpc-09e41b55789f5789e]
aws_vpv.gateway.vpm_gateway: Creating...
aws_vpv.puteway.vpm_gateway: Creating...
aws_vpv.gateway.vpm_gateway: Creating...
aws_vpv.gateway.vpm_gateway: Creating...
aws_instance.singhai[1]: still creating... [10s.clapsed]
aws_vpv.gateway.vpm_gateway.creating... [10s.clapsed]
aws_vpv.gateway.creating... [10s.clapsed]
aws_vpv.gateway.cre
```

Step1: Created two T2 Micro EC2 Instances.

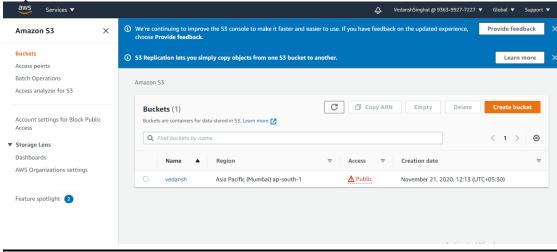


Step2: Create a VPN on AWS





Step 3: Created a S3 Bucket



And after that I have destroyed my whole infrastructure just by runnig one command terraform destroy -auto-approve

Command Prompt

```
aws_vpr.vpc: Refreshing state... [id=vpc-09e41b55789f5789e]
aws_security_group.secgrp: Refreshing state... [id=sg-0afce6605b888a81c]
aws_sistance.singhal: Refreshing state... [id=vedansh]
aws_instance.singhal[0]: Refreshing state... [id=i-00854db028aa3d86a]
aws_instance.singhal[0]: Refreshing state... [id=i-06854db028aa3d86a]
aws_vpn_gateway.vpn_gateway: Refreshing state... [id=vgw-0196f13fb35a4e039]
aws_vpn_connection.main: Refreshing state... [id=vgw-0196f13fb35a4e039]
aws_vpn_connection.main: Refreshing state... [id=vgw-0196f13fb35a4e039]
aws_instance.singhal[0]: Destroying... [id=i-06854db028aa3d86a]
aws_instance.singhal[1]: Destroying... [id=vedansh]
aws_instance.singhal[1]: Destroying... [id=vedansh]
aws_vpn_connection.main: Destroying... [id=vpn-0e5d1b508d93f1901]
aws_s_3_bucket.singhal: Destroying... [id=vpn-0e5d1b508d93f1901]
aws_instance.singhal[0]: Still destroying... [id=i-06854db028aa3d86a, 10s elapsed]
aws_instance.singhal[1]: Still destroying... [id=i-090f0bcd2c44ff570, 10s elapsed]
aws_instance.singhal[1]: Still destroying... [id=vpn-0e5d1b508d93f1901, 10s elapsed]
aws_vpn_connection.main: Destruction complete after 11s
aws_vpn_gateway.vpn_gateway: Destroying... [id=vpn-0e5d1b508d93f1901, 10s elapsed]
aws_vpn_gateway.vpn_gateway: Destroying... [id=vpn-0e5d1b508d93f1901, 10s elapsed]
aws_vpn_gateway.vpn_gateway: Destruction complete after 1s
aws_vpn_gateway.vpn_gateway: Destruction complete after 1s
aws_vpc.vpc: Destroying... [id=vpc-09e41b55789f5789e]
aws_customer_gateway.customer_gateway: Destruction complete after 1s
aws_vpc.vpc: Destruction complete after 5
aws_instance.singhal[0]: Still destroying... [id=i-06854db028aa3d86a, 20s elapsed]
aws_instance.singhal[0]: Still destroying... [id=i-06854db028aa3d86a, 20s elapsed]
aws_instance.singhal[1]: Still destroying... [id=i-090f0bcd2c44ff570, 30s elapsed]
aws_instance.singhal[1]: Destruction complete after 3s
aws_instance.singhal[1]: Destruction complete after 1s
aws_security_group.secgrp: Destroying... [id=i-090f0bcd2c44ff570, 30s elapsed]
aws_i
```