Assignment 1

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1) Create two T2 Micro EC2 Instances.

a. First we will create 2 instances using script.
b. After creating 2 instances we will associate a security group for our instances.
c. These instances will get deployed in default VPC's.

```
resource "aws_instance" "KushSharmaInstance" {
        ami = "ami-00dd0e5626798373"
        count = "2"
        key_name = "Kush"
        instance_type = "t2.micro"
        security_groups = ["KushSharma"]
        tags = {
                Name = "KushSharmaInstance"
        }
}
```

```
resource "aws_security_group" "KushSharma" {
        name = "KushSharma"
        description = "This is the Security Groups"
        ingress {
                from_port = 22
                to_port = 22
                protocol = "tcp"
                cidr_blocks = ["0.0.0.0/0"]
        }
        egress {
                from_port = 0
                to_port = 65535
                protocol = "tcp"
                cidr_blocks = ["0.0.0.0/0"]
        }
        tags = {
                Name = "KushSharma"
        }
}
```

2) Create a VPN in AWS.

a. For creating VPN we will first set up VPN gateway.
b. Then we would setup a customer gateway
c. And at last we would set up a vpn connection.

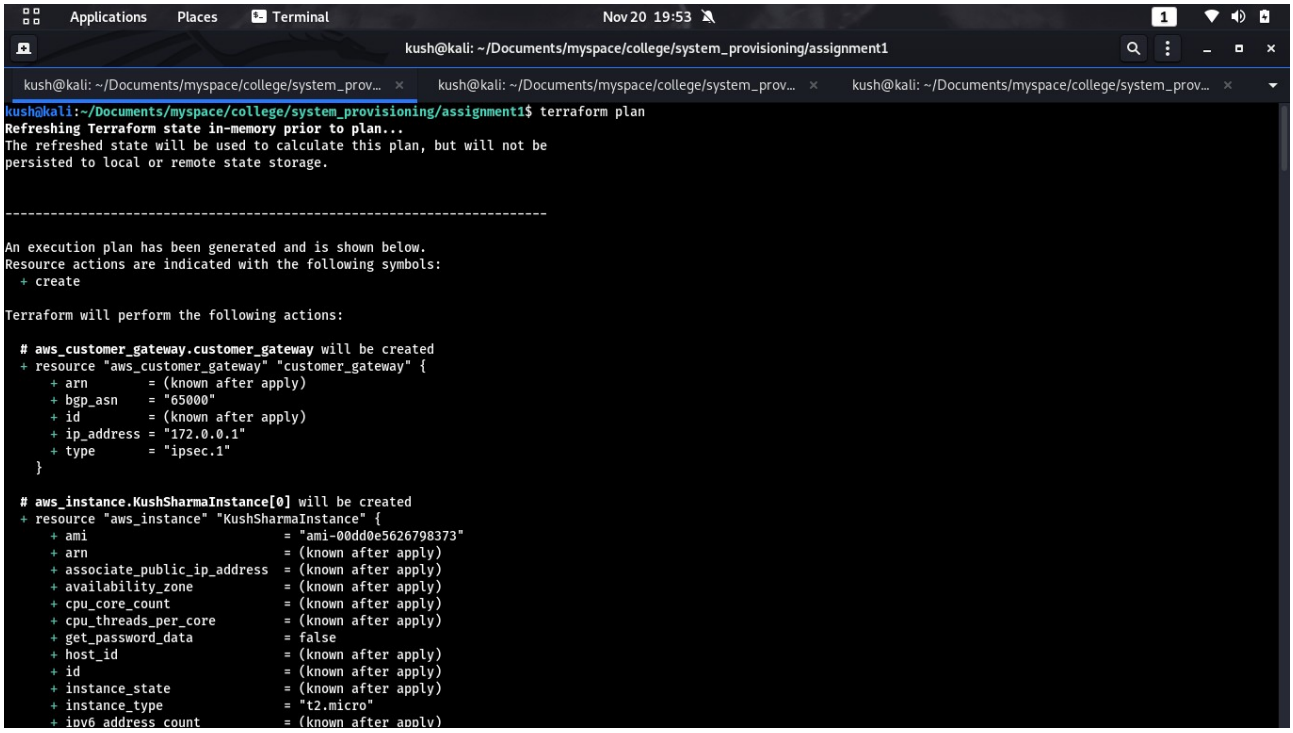
```
resource "aws_vpn_gateway" "vpn_gateway" {
        vpc_id = aws_vpc.vpc.id
}

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
}
```

3. Create a s3 Bucket.

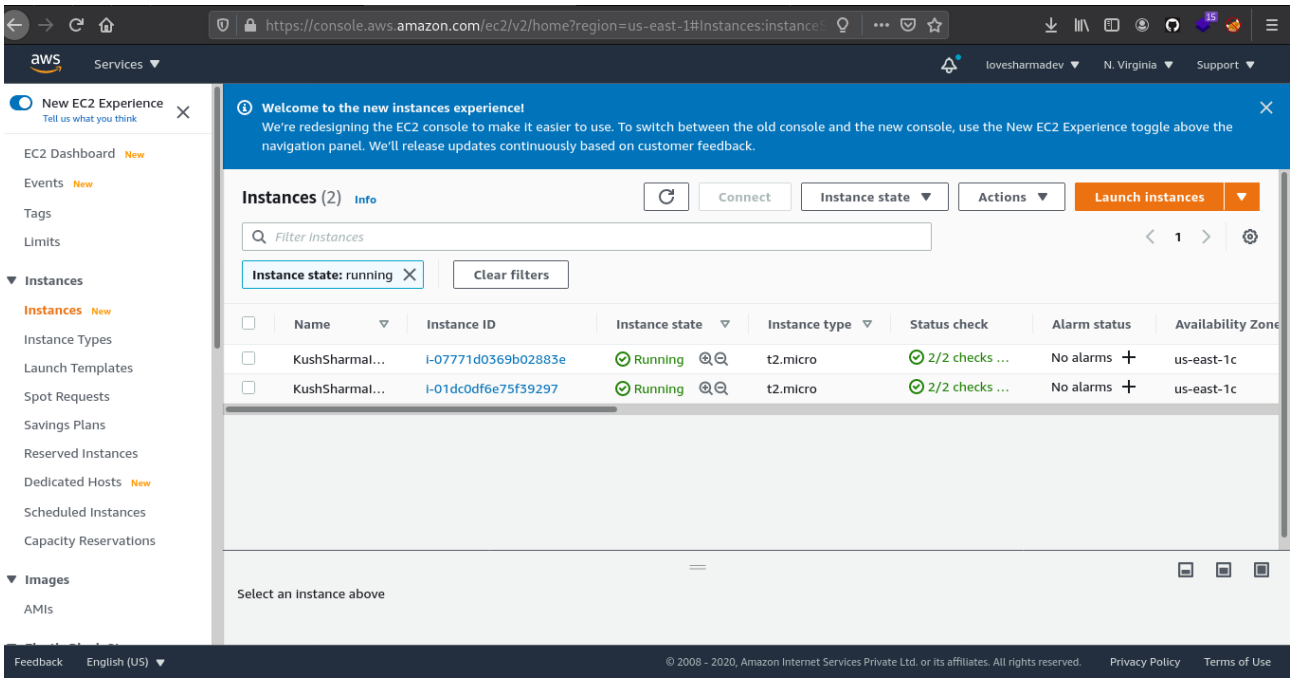
a. Mentioned below is the script for setting up S3 bucket.

```
resource "aws_s3_bucket" "tf_course" {
        bucket = "Dastan-aka-Kush"
        acl = "private"
}
```

Output:-




```
kush@kali:~/Documents/myspace/college/system_provisioning/assignment1$ terraform apply
aws_vpc.vpc: Refreshing state... [id=vpc-0fe2641b1b619c069]
aws_customer_gateway.customer_gateway: Refreshing state... [id=cgw-01217b17f4021fc0c]
aws_security_group.KushSharma: Refreshing state... [id=sg-0e79405887bd704e6]
aws_vpn_gateway.vpn_gateway: Refreshing state... [id=vgw-01b3b648cc0010eb7]
aws_vpn_connection.main: Refreshing state... [id=vpn-02eba0efd23ce2ed5]

An execution plan has been generated and is shown below.
Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_instance.KushSharmaInstance[0] will be created
  + resource "aws_instance" "KushSharmaInstance" {
      + ami                          = "ami-04bf6dcdc9ab498ca"
      + arn                          = (known after apply)
      + associate_public_ip_address  = (known after apply)
      + availability_zone            = (known after apply)
      + cpu_core_count               = (known after apply)
      + cpu_threads_per_core         = (known after apply)
      + get_password_data            = false
      + host_id                      = (known after apply)
      + id                           = (known after apply)
      + instance_state               = (known after apply)
      + instance_type                = "t2.micro"
      + ipv6_address_count           = (known after apply)
      + ipv6_addresses               = (known after apply)
      + key_name                     = "Kush"
      + outpost_arn                  = (known after apply)
      + password_data                = (known after apply)
      + placement_group              = (known after apply)
      + primary_network_interface_id = (known after apply)
      + private_dns                  = (known after apply)
      + private_ip                   = (known after apply)
      + public_dns                   = (known after apply)
      + public_ip                    = (known after apply)
```


https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#Instances:instance
aws
Services
lovesharmadev
N. Virginia
Support
New EC2 Experience
Tell us what you think
EC2 Dashboard New
Events New
Tags
Limits
Instances
Instances New
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts New
Scheduled Instances
Capacity Reservations
Images
AMIs
Welcome to the new instances experience!
We're redesigning the EC2 console to make it easier to use. To switch between the old console and the new console, use the New EC2 Experience toggle above the navigation panel. We'll release updates continuously based on customer feedback.
Instances (2) Info
Connect
Instance state
Actions
Launch instances
Filter instances
Instance state: running
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
KushSharmal...
i-07771d0369b02883e
Running
t2.micro
2/2 checks ...
No alarms
us-east-1c
KushSharmal...
i-01dc0df6e75f39297
Running
t2.micro
2/2 checks ...
No alarms
us-east-1c
Select an instance above
Feedback
English (US)
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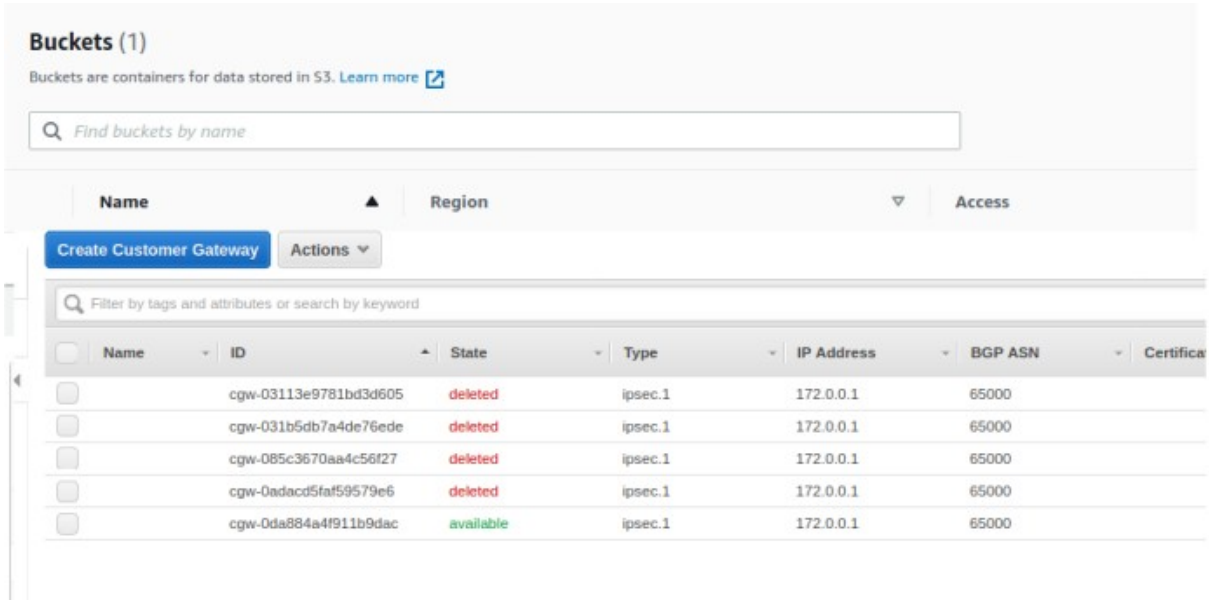
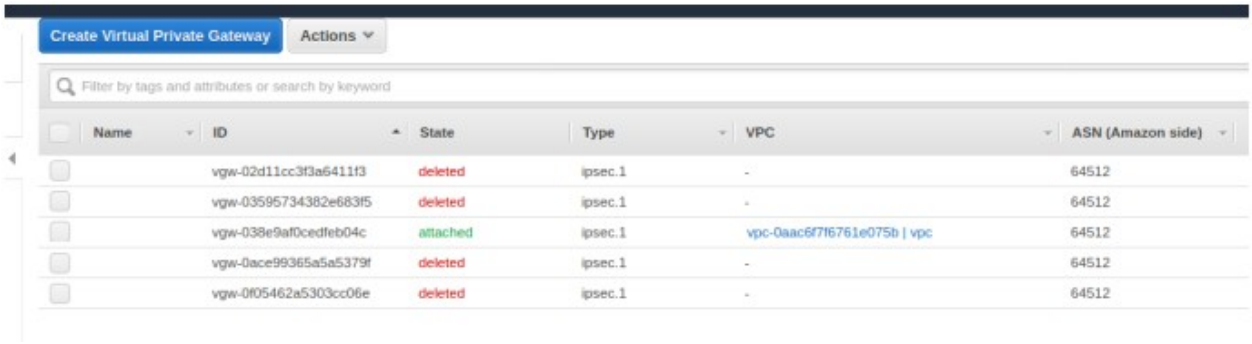
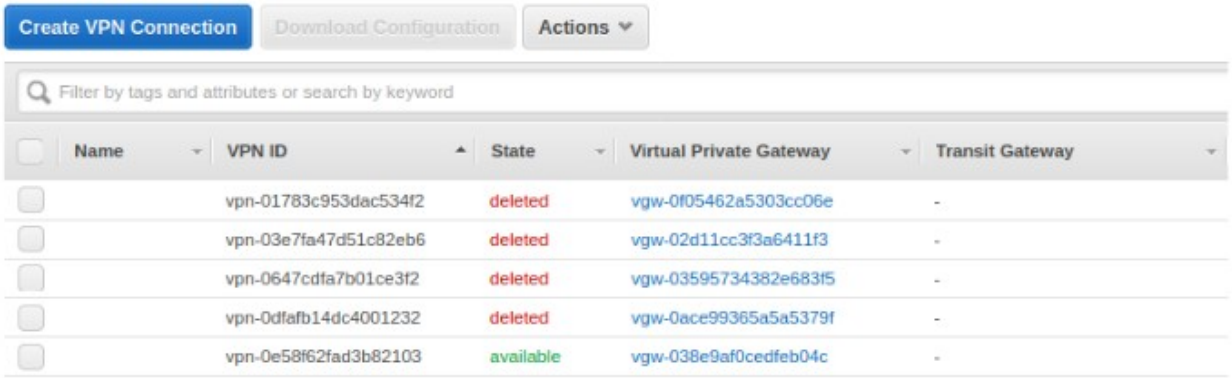

Buckets (1)
Buckets are containers for data stored in S3. Learn more
Find buckets by name
Name
Region
Access
Create Customer Gateway
Actions
Filter by tags and attributes or search by keyword
Name
ID
State
Type
IP Address
BGP ASN
cgw-03113e9781bd3d605
deleted
ipsec.1
172.0.0.1
65000
cgw-031b5db7a4de76ede
deleted
ipsec.1
172.0.0.1
65000
cgw-0B5c3670aa4c56f27
deleted
ipsec.1
172.0.0.1
65000
cgw-0adacd5faf59579e6
deleted
ipsec.1
172.0.0.1
65000
cgw-0da884a4f911b9dac
available
ipsec.1
172.0.0.1
65000






```
kush@kali:~/Documents/myspace/college/system_provisioning/assignment1$ terraform destroy
aws_vpc.vpc: Refreshing state... [id=vpc-03dab245b1e406349]
aws_customer_gateway.customer_gateway: Refreshing state... [id=cgw-0aca8c9b5c9d5d815]
aws_security_group.KushSharma: Refreshing state... [id=sg-080cbc428a5a1a6de]
aws_instance.KushSharmaInstance[1]: Refreshing state... [id=i-01dc0df6e75f39297]
aws_instance.KushSharmaInstance[0]: Refreshing state... [id=i-07771d0369b02883e]
aws_vpn_gateway.vpn_gateway: Refreshing state... [id=vgw-0ad1541a6c36e0526]
aws_vpn_connection.main: Refreshing state... [id=vpn-05b2055f0aa6876d4]

An execution plan has been generated and is shown below.
Resource actions are indicated with the following symbols:
  - destroy

Terraform will perform the following actions:

  # aws_customer_gateway.customer_gateway will be destroyed
  - resource "aws_customer_gateway" "customer_gateway" {
      - arn        = "arn:aws:ec2:us-east-1:578684658346:customer-gateway/cgw-0aca8c9b5c9d5d815" -> null
      - bgp_asn    = "65000" -> null
      - id         = "cgw-0aca8c9b5c9d5d815" -> null
      - ip_address = "172.0.0.1" -> null
      - tags       = {} -> null
      - type       = "ipsec.1" -> null
    }

  # aws_instance.KushSharmaInstance[0] will be destroyed
  - resource "aws_instance" "KushSharmaInstance" {
      - ami                          = "ami-04bf6dcdc9ab498ca" -> null
      - arn                          = "arn:aws:ec2:us-east-1:578684658346:instance/i-07771d0369b02883e" -> null
      - associate_public_ip_address  = true -> null
      - availability_zone            = "us-east-1c" -> null
      - cpu_core_count               = 1 -> null
      - cpu_threads_per_core         = 1 -> null
      - disable_api_termination      = false -> null
      - ebs_optimized                = false -> null
      - get_password_data            = false -> null
      - hibernation                  = false -> null
```