



SPCM - LAB
6th Sem

Submitted To:

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Submitted By:

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Batch 2 -NH

Writing Terraform Scripts to perform the following task 2 ec2 Instances, VPN and S3 main.tf

```
main.tf  X
main.tf > provider "aws"
1  terraform {
2      required_providers {
3          aws = {
4              source = "hashicorp/aws"
5              version = "5.31.0"
6          }
7      }
8  }
9
10
11 provider "aws" {
12     region = "ap-south-1"
13     access_key = "AKIA4ZZIDPT" string ;KB"
14     secret_key = "QLYtXlk4Jk+Ndqf/Jj5E1SzuA0ee0NI1qAGtkNxs"
15 }
```

Running terraform init

```
cd C:\Users\Stuti\OneDrive\Desktop\SPCM_Assignment
Initializing the backend...
Initializing provider plugins...
- Finding hashicorp/aws versions matching "5.31.0"...
- Installing hashicorp/aws v5.31.0...
- Installed hashicorp/aws v5.31.0 (signed by HashiCorp)
Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

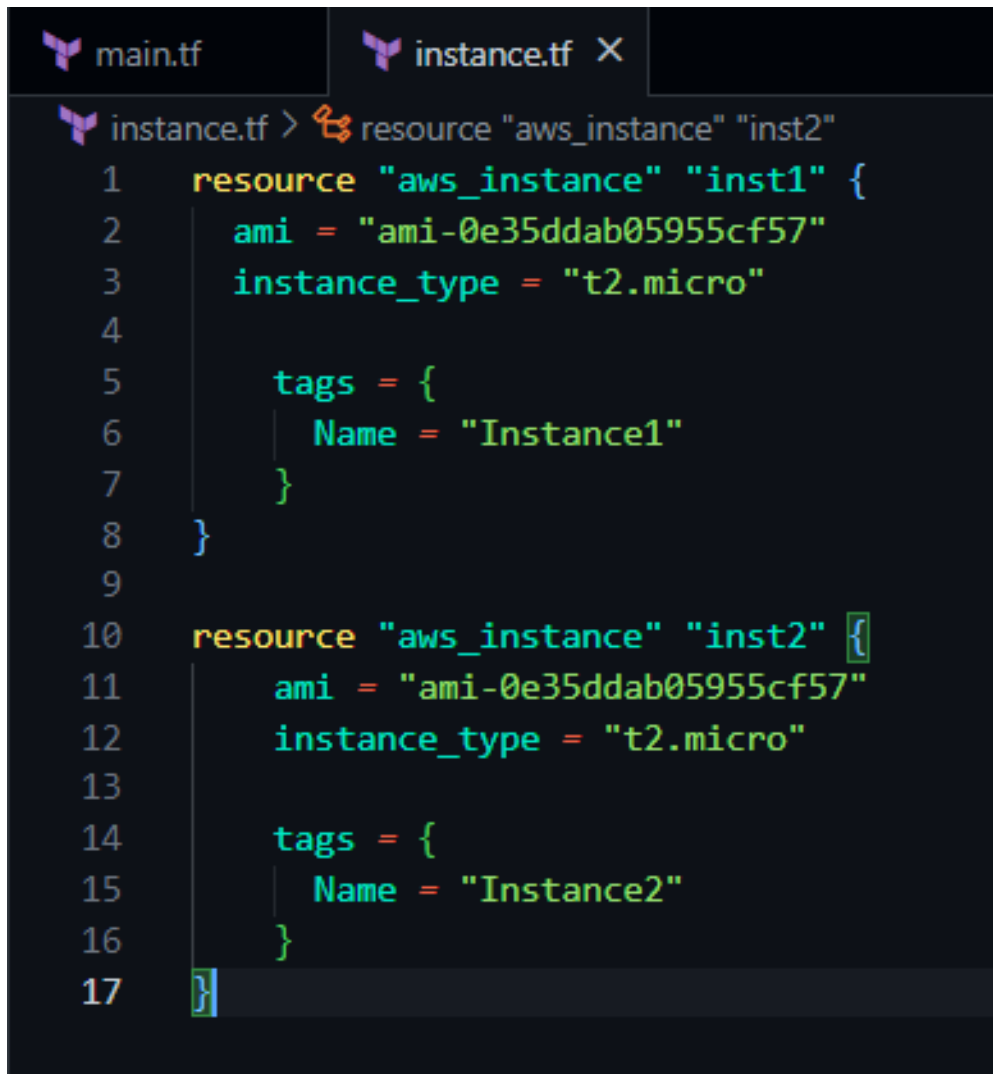
Terraform has been successfully initialized!

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.
```

Terraform init to initialize the terraform folder which will have the aws provider plugin installed

instance.tf



The image shows a code editor with two tabs: 'main.tf' and 'instance.tf'. The 'instance.tf' tab is active and contains Terraform code for creating two AWS EC2 instances. The code is as follows:

```
instance.tf > resource "aws_instance" "inst2"
1  resource "aws_instance" "inst1" {
2      ami = "ami-0e35ddab05955cf57"
3      instance_type = "t2.micro"
4
5      tags = {
6          Name = "Instance1"
7      }
8  }
9
10 resource "aws_instance" "inst2" {
11     ami = "ami-0e35ddab05955cf57"
12     instance_type = "t2.micro"
13
14     tags = {
15         Name = "Instance2"
16     }
17 }
```

This file holds the iac code to make 2 instances - t2-micro ec2 machines

resource.tf

```
resource.tf > ...
1  resource "aws_vpc" "main" {
2      cidr_block = "10.0.0.0/16"
3
4      tags = {
5          Name = "Suja1VPC"
6      }
7  }
8
9  resource "aws_vpn_gateway" "example" {
10     vpc_id = aws_vpc.main.id
11
12     tags = {
13         Name = "MyVPNGateway"
14     }
15 }
16
```

```
resource "aws_customer_gateway" "example" {
    bgp_asn = 65000
    ip_address = "203.0.113.1"
    type = "ipsec.1"

    tags = {
        Name = "MyCustomerGateway"
    }
}

resource "aws_vpn_connection" "example" {
    customer_gateway_id = aws_customer_gateway.example.id
    vpn_gateway_id = aws_vpn_gateway.example.id
    type = "ipsec.1"
    static_routes_only = true
}
```

This resource.tf hold the iac code to create vpc , the customer gateway and the vpn connection.

s3.tf

```
s3.tf > ...
1  resource "aws_s3_bucket" "example" {
2      bucket = "sujal-s3"
3      acl = "private"
4  }
5
6
```

The s3.tf hold the code to create a s3 bucket which has a unique name

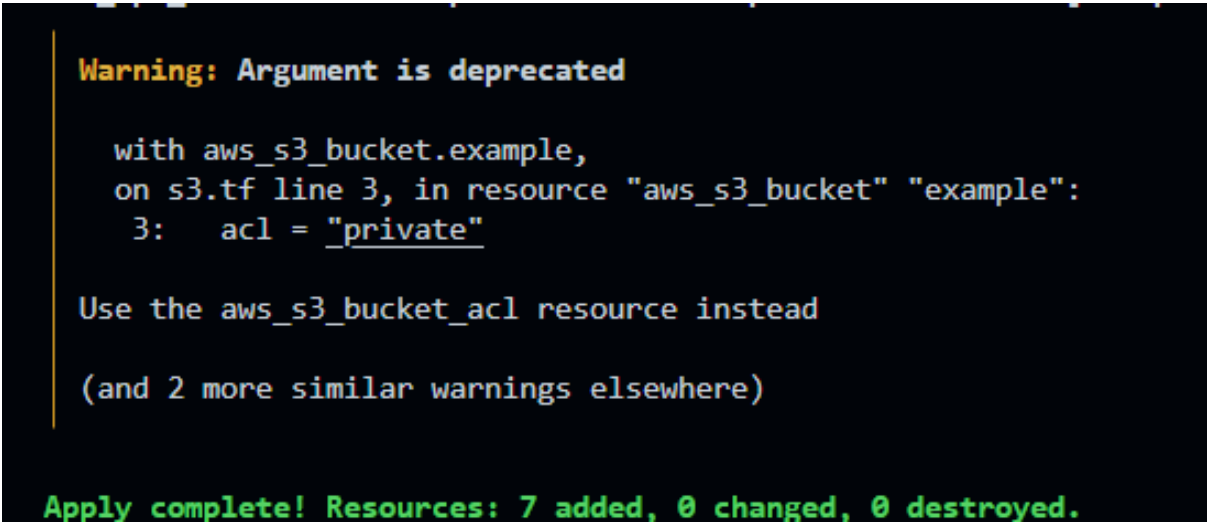
Outputs:

terraform plan

```
# aws_vpn_gateway.example will be created
+ resource "aws_vpn_gateway" "example" {
+   amazon_side_asn = (known after apply)
+   arn              = (known after apply)
+   id              = (known after apply)
+   tags            = {
+       + "Name" = "MyVPNGateway"
+   }
+   tags_all        = {
+       + "Name" = "MyVPNGateway"
+   }
+   vpc_id          = (known after apply)
+ }

Plan: 7 to add, 0 to change, 0 to destroy.
```

Terraform apply



Customer Gateway

| Customer gateways (1) info | | | | | | | Actions Create customer gateway | |
|--|-------------------|-----------------------|-----------|---------|-------------|---------|---|--|
| <input type="text" value="Find resource by attribute or tag"/> | | | | | | | < 1 > ⚙️ | |
| <input type="radio"/> | Name | Customer gateway ID | State | BGP ASN | IP address | Type | | |
| <input type="radio"/> | MyCustomerGateway | cgw-0f6619c592d68af7e | Available | 65000 | 203.0.113.1 | ipsec.1 | | |

Vpc

| s (2) Info | | | | | | Last updated less than a minute ago Actions Create VPC | |
|---|------|-----------------------|-----------|-----------------|---------------|---|--|
| <input type="text" value="Cs by attribute or tag"/> | | | | | | < 1 > ⚙️ | |
| <input type="checkbox"/> | Name | VPC ID | State | Block Public... | IPv4 CIDR | IPv6 CIDR | |
| <input type="checkbox"/> | VPC | vpc-09aa0f67370c7913c | Available | Off | 10.0.0.0/16 | - | |
| <input type="checkbox"/> | | vpc-0aa7c2c88a69a7678 | Available | Off | 172.31.0.0/16 | - | |

S3

| pose buckets | | | | Directory buckets | |
|---|------|----------------------------------|--|--|--|
| urpose buckets (1) Info | | | | All AWS Regions Copy ARN Empty Delete Create bucket | |
| ontainers for data stored in S3. | | | | | |
| <input type="text" value="uckets by name"/> | | | | < 1 > ⚙️ | |
| <input type="checkbox"/> | Name | AWS Region | IAM Access Analyzer | Creation date | |
| <input type="checkbox"/> | s3 | Asia Pacific (Mumbai) ap-south-1 | View analyzer for ap-south-1 | April 23, 2025, 17:19:34 (UTC+05:30) | |

Instances

| Instances (2) Info | | | | | | | | Last updated less than a minute ago Connect Instance state Actions Launch instances | |
|---|-----------|---------------------|----------------|---------------|-------------------|-----------------------------|-------------------|--|--|
| <input type="text" value="Find Instance by attribute or tag (case-sensitive)"/> | | | | | | | | All states < 1 > ⚙️ | |
| <input type="checkbox"/> | Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 | |
| <input type="checkbox"/> | Instance2 | i-0d2ed74adf8d5679b | Running | t2.micro | 2/2 checks passed | View alarms | ap-south-1a | ec2-13-201 | |
| <input type="checkbox"/> | Instance1 | i-0c8d0b20b4d21cad3 | Running | t2.micro | 2/2 checks passed | View alarms | ap-south-1a | ec2-13-126 | |