

ASSIGNMENT-1

System Provisioning & Configuration Management

Terraform scripts to perform following tasks on AWS cloud Platform

1. Creating two T2.micro ec2 instances

Script :

```
provider "aws" {  
  
  region= "us-west-1"  
  
  access_key= "AKIAIGOKUAPY3EMYUKIQ"  
  
  secret_key= "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"  
  
}  
  
resource "aws_instance" "myFirstInstance" {  
  
  ami      = "ami-07dd19a7900a1f049"  
  
  count=2  
  
  key_name = "keypair"  
  
  instance_type = "t2.micro"  
  
  security_groups= [ "ishaan"]  
  
  tags= {  
  
    Name = "ishaan_instance"  
  
  }  
  
}
```

```
resource "aws_vpc" "vpc" {  
  
  cidr_block = "10.0.0.0/24"  
  
}
```

```
resource "aws_security_group" "ishaan" {  
  
  name      = "ishaan"  
  
  description = "security group "
```

```
  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"]  
  
  }
```

```
egress {

  from_port = 0

  to_port = 65535

  protocol = "tcp"

  cidr_blocks = ["0.0.0.0/0"]

}
```

```
tags= {

  Name = "ishaan"

}

}
```

Output:

```
+ cidr_block = "10.0.0.0/16"
+ default_network_acl_id = (known after apply)
+ default_route_table_id = (known after apply)
+ default_security_group_id = (known after apply)
+ dhcp_options_id = (known after apply)
+ enable_classiclink = (known after apply)
+ enable_classiclink_dns_support = (known after apply)
+ enable_dns_hostnames = (known after apply)
+ enable_dns_support = true
+ id = (known after apply)
+ instance_tenancy = "default"
+ ipv6_association_id = (known after apply)
+ ipv6_cidr_block = (known after apply)
+ main_route_table_id = (known after apply)
+ owner_id = (known after apply)
}

Plan: 4 to add, 0 to change, 0 to destroy.

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_vpc.vpc: Creating...
aws_instance.myFirstInstance[1]: Creating...
aws_security_group.ishaan: Creating...
aws_instance.myFirstInstance[0]: Creating...
aws_instance.myFirstInstance[1]: Still creating... [10s elapsed]
aws_vpc.vpc: Still creating... [10s elapsed]
aws_instance.myFirstInstance[0]: Still creating... [10s elapsed]
aws_vpc.vpc: Creation complete after 15s [id=vpc-08898ad39a785553c]
aws_instance.myFirstInstance[1]: Still creating... [20s elapsed]
aws_instance.myFirstInstance[0]: Still creating... [20s elapsed]
aws_instance.myFirstInstance[1]: Still creating... [30s elapsed]
aws_instance.myFirstInstance[0]: Creation complete after 30s [id=i-0d40791652d0c1a1e]
```

<div> <div>Launch Instance</div> <div>Connect</div> <div>Actions</div> </div> <div> <div>Filter by tags and attributes or search by keyword</div> <div>1 to 2 of 2</div> </div>									
	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP
<input type="checkbox"/>	ishaan_insta...	i-005be0511f59991a0	t2.micro	us-west-1c	running	2/2 checks ...	None	ec2-54-219-170-125.us...	54.219.170.125
<input type="checkbox"/>	ishaan_insta...	i-0d40791652d0c1a1e	t2.micro	us-west-1c	running	2/2 checks ...	None	ec2-18-144-16-77.us-w...	18.144.16.77

2. Creating a VPN on AWS

Script:

```

provider "aws" {

  region= "us-west-1"

  access_key= "AKIAIGOKUAPY3EMYUKIQ"

  secret_key= "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"

}

resource "aws_vpc" "vpc" {

  cidr_block = "10.0.0.0/24"

}

resource "aws_vpn_gateway" "vpn_gateway" {

  vpc_id = aws_vpc.vpc.id

}

resource "aws_customer_gateway" "customer_gateway" {

```

```
bgp_asn    = 65000

ip_address = "172.0.0.8"

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" "ishaan" {

  name      = "ishaan"

  description = "security group "

  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"]  
  
}
```

```
egress {  
  
    from_port = 0  
  
    to_port = 65535  
  
    protocol = "tcp"  
  
    cidr_blocks = ["0.0.0.0/0"]  
  
}
```

```
tags= {  
  
    Name = "ishaan"  
  
}
```

```
}
```

Output:

```

aws_customer_gateway.customer_gateway: Creating...
aws_customer_gateway.customer_gateway: Still creating... [10s elapsed]
aws_customer_gateway.customer_gateway: Creation complete after 15s [id=cgw-06abb75e2c1ad4b13]
aws_vpn_connection.main: Creating...
aws_vpn_connection.main: Still creating... [10s elapsed]
aws_vpn_connection.main: Still creating... [20s elapsed]
aws_vpn_connection.main: Still creating... [30s elapsed]
aws_vpn_connection.main: Still creating... [40s elapsed]
aws_vpn_connection.main: Still creating... [50s elapsed]
aws_vpn_connection.main: Still creating... [1m0s elapsed]
aws_vpn_connection.main: Still creating... [1m10s elapsed]
aws_vpn_connection.main: Still creating... [1m20s elapsed]
aws_vpn_connection.main: Still creating... [1m30s elapsed]
aws_vpn_connection.main: Still creating... [1m40s elapsed]
aws_vpn_connection.main: Still creating... [1m50s elapsed]
aws_vpn_connection.main: Still creating... [2m0s elapsed]

aws_vpn_connection.main: Still creating... [2m10s elapsed]
aws_vpn_connection.main: Still creating... [2m20s elapsed]
aws_vpn_connection.main: Still creating... [2m30s elapsed]
aws_vpn_connection.main: Still creating... [2m40s elapsed]
aws_vpn_connection.main: Still creating... [2m50s elapsed]
aws_vpn_connection.main: Still creating... [3m0s elapsed]
aws_vpn_connection.main: Still creating... [3m10s elapsed]
aws_vpn_connection.main: Still creating... [3m20s elapsed]
aws_vpn_connection.main: Still creating... [3m30s elapsed]
aws_vpn_connection.main: Creation complete after 3m38s [id=vpn-0b3c0ce564ceed0af]

Apply complete! Resources: 2 added, 0 changed, 0 destroyed.

```

Create Customer Gateway Actions							
Filter by tags and attributes or search by keyword							
<input type="checkbox"/>	Name	ID	State	Type	IP Address	BGP ASN	Certificate ARN
<input type="checkbox"/>		cgw-06abb75e2c1ad4b13	available	ipsec.1	172.0.0.7	65000	
<input type="checkbox"/>		cgw-0e3aa64cc953631c3	available	ipsec.1	172.0.0.8	65000	

Create Virtual Private Gateway Actions						
Filter by tags and attributes or search by keyword						
<input type="checkbox"/>	Name	ID	State	Type	VPC	ASN (Amazon side)
<input type="checkbox"/>		vgw-056837e8b8cd2881f	attached	ipsec.1	vpc-0a9ae8a74c05b971f	64512
<input type="checkbox"/>		vgw-074309f39f8f97fb6	attached	ipsec.1	vpc-09d9b8201970e3efa	64512

3. Creating a S3 bucket

Script :

```
provider "aws" {  
  
    region= "us-west-1"  
  
    profile= "Prophet_Ishaan"  
  
    access_key= "AKIAIGOKUAPY3EMYUKIQ"  
  
    secret_key= "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"  
  
}  
  
resource "aws_s3_bucket" "rollno23" {  
  
    bucket = "rollno23"  
  
}
```


Output :

```
+ website_domain      = (known after apply)
+ website_endpoint    = (known after apply)

+ versioning {
+   + enabled      = (known after apply)
+   + mfa_delete   = (known after apply)
+ }
}

Plan: 1 to add, 0 to change, 0 to destroy.

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_s3_bucket.rollno23: Creating...
aws_s3_bucket.rollno23: Still creating... [10s elapsed]
aws_s3_bucket.rollno23: Still creating... [20s elapsed]
aws_s3_bucket.rollno23: Creation complete after 21s [id=rollno23]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
```

Amazon S3

Buckets (1) Refresh Copy ARN Empty Delete Create bucket

Buckets are containers for data stored in S3. [Learn more](#)

	Name ▲	Region ▼	Access ▼	Creation date ▼
<input type="radio"/>	rollno23	US West (N. California) us-west-1	Objects can be public	November 20, 2020, 13:03 (UTC-08:00)