TERRAFORM CODE

Write Terraform script to create highly available infrastructure in AWS. The infra should have1 vpc, 3 subnets setup in 3 different az and 2 instances setup in 2 different subnets

```
provider "aws" {
  region = "ap-south-1"
  profile = "default"
}
```

2 instances setup

```
resource "aws_instance" "ec2-1" {
          ami = "ami-079db87dc4c10ac91"
          instance_type = "t2.micro"
          key_name = "prd01"
   //vpc_security_group_ids = ["${aws_security_group.rtp03-sg.id}"]
   subnet_id = "${aws_subnet.rtp01-public_subent_01.id}"
}


resource "aws_instance" "ec2-2" {
          ami = "ami-0a0f1259dd1c90938"
          instance_type = "t2.micro"
          key_name = "prd01"
   //vpc_security_group_ids = ["${aws_security_group.rtp03-sg.id}"]
   subnet_id = "${aws_subnet.rtp02-public_subent_02.id}"
}


resource "aws_security_group" "rtp03-sg" {
          name = "rtp03-sg"
          vpc_id = "${aws_vpc.rtp03-vpc.id}"
          ingress {
          from_port = 22
          to_port = 22
          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"]
 }


 ingress {
        from_port = 80
        to_port = 80
        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"]
        }

        tags = {
        Name = "ssh-sg"

        }

}
```

1 vpc created

```
//creating a VPC
resource "aws_vpc" "rtp03-vpc" {
        cidr_block = "10.1.0.0/16"
        tags = {
        Name = "rpt03-vpc"
        }

}
```

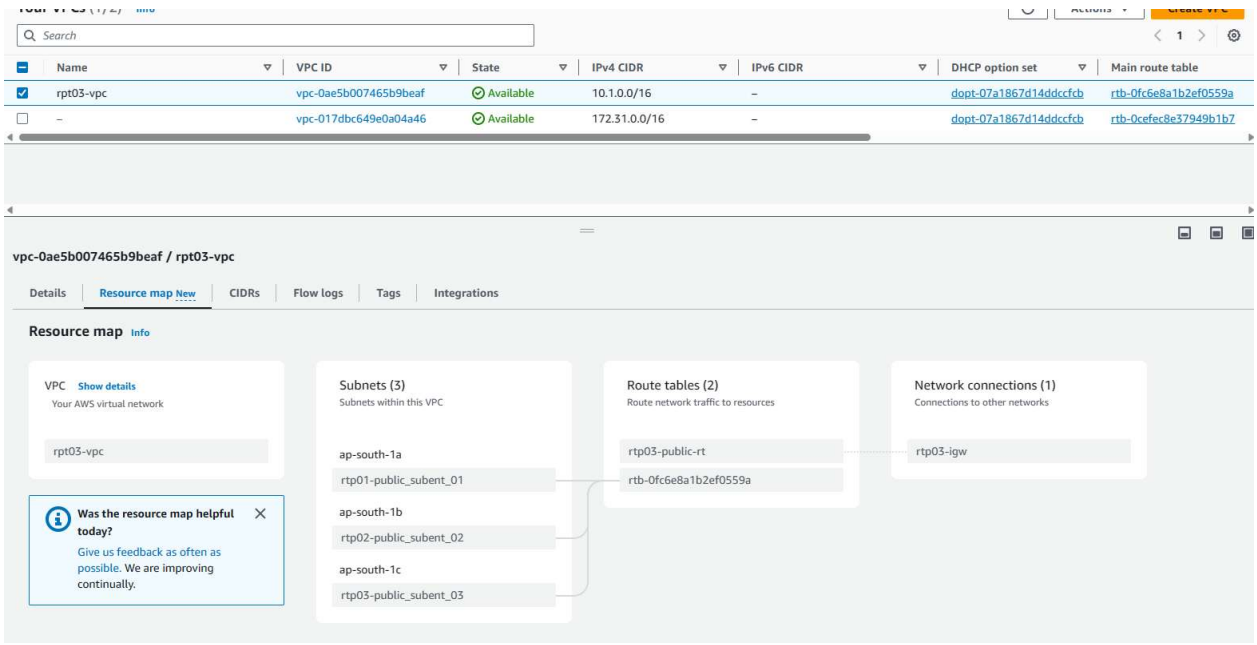
3 subnets setup in 3 different az

```
// Creating a Subnet
resource "aws_subnet" "rtp01-public_subent_01" {
        vpc_id                  = "${aws_vpc.rtp03-vpc.id}"
        cidr_block              = "10.1.1.0/24"
        map_public_ip_on_launch = true
        availability_zone       = "ap-south-1a"
        tags = {
        Name = "rtp01-public_subent_01"
        }
}

resource "aws_subnet" "rtp02-public_subent_02" {
        vpc_id                  = "${aws_vpc.rtp03-vpc.id}"
        cidr_block              = "10.1.2.0/24"  # Unique CIDR block
        map_public_ip_on_launch = true
        availability_zone       = "ap-south-1b"
        tags = {
        Name = "rtp02-public_subent_02"
        }
}

resource "aws_subnet" "rtp03-public_subent_03" {
        vpc_id                  = "${aws_vpc.rtp03-vpc.id}"
        cidr_block              = "10.1.3.0/24"  # Unique CIDR block
        map_public_ip_on_launch = true
        availability_zone       = "ap-south-1c"
        tags = {
        Name = "rtp03-public_subent_03"
        }
}

//Creating a Internet Gateway
resource "aws_internet_gateway" "rtp03-igw" {
        vpc_id = "${aws_vpc.rtp03-vpc.id}"
        tags = {
        Name = "rtp03-igw"
        }
}

// Create a route table
resource "aws_route_table" "rtp03-public-rt" {
```

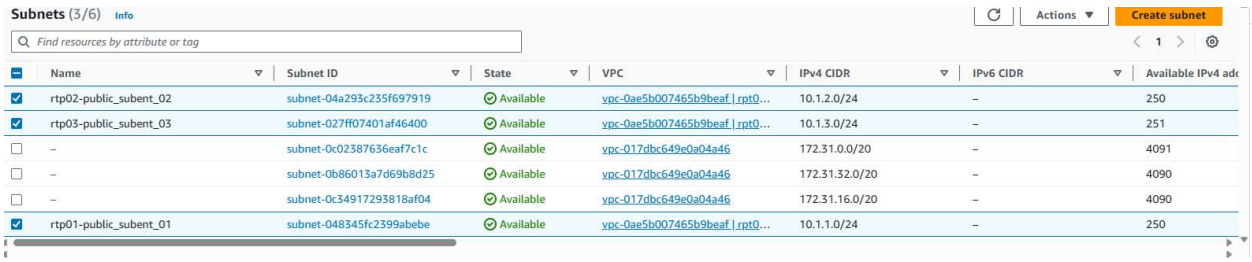
```
        vpc_id = "${aws_vpc.rtp03-vpc.id}"
        route {
        cidr_block = "0.0.0.0/0"
        gateway_id = "${aws_internet_gateway.rtp03-igw.id}"
        }
        tags = {
        Name = "rtp03-public-rt"
        }
}
```

Outputs

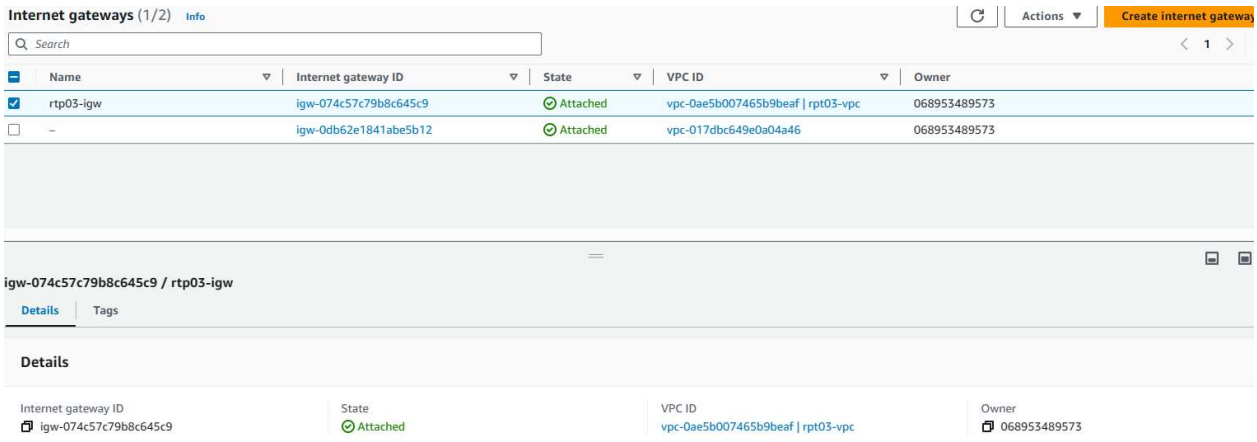
VPC



Subnets which have been created



Internet Gateway



Route tables