**AWS Vpc Creation in Terraform**

**Create terraform template for VPC Creation with following components**

1. EC2 - ami-024e6efaf93d85776
2. region - us-east-2
3. Security Group - rtp03-sg [ inbound : 22,80 outbound : all ]
4. Public Subnet - rtp03-public\_subent\_01
5. Internet gateway - rtp03-igw
6. Route Table - rtp03-public-rt
7. VPC id - aws\_vpc.rtp03-vpc.id

This Terraform script is used to create infrastructure resources on Amazon Web Services (AWS) using the Infrastructure as Code (IaC) approach. It provides an AWS EC2 instance, VPC, subnet, security group, internet gateway, route table, and associates resources together.

**Source Code - vpc.tf**

**//Provider Name and EC2 resource creation**

provider "aws" {

region = "us-east-2"

profile = "default"

}

resource "aws\_instance" "ec2" {

ami = "ami-024e6efaf93d85776"

instance\_type = "t2.micro"

key\_name = "prd01"

//vpc\_security\_group\_ids = ["${aws\_security\_group.rtp03-sg.id}"]

subnet\_id = "${aws\_subnet.rtp03-public\_subent\_01.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"]

}

egress {

from\_port = 0

to\_port = 0

protocol = "-1"

cidr\_blocks = ["0.0.0.0/0"]

}

tags = {

Name = "ssh-sg"

}

}

**//creating a VPC**

resource "aws\_vpc" "rtp03-vpc" {

cidr\_block = "10.1.0.0/16"

tags = {

Name = "rpt03-vpc"

}

}

**// Creating a Subnet**

resource "aws\_subnet" "rtp03-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 = "us-east-2a"

tags = {

Name = "rtp03-public\_subent\_01"

}

}

//**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"

}

}

**// Associate subnet with routetable**

resource "aws\_route\_table\_association" "rtp03-rta-public-subent-1" {

subnet\_id = "${aws\_subnet.rtp03-public\_subent\_01.id}"

route\_table\_id = "${aws\_route\_table.rtp03-public-rt.id}"

}