Text

Description automatically generated

Main.tf:-

provider "aws" {

region = "us-east-1"

}

data "aws\_ssm\_parameter" "ami\_id" {

name = "/aws/service/ami-amazon-linux-latest/amzn2-ami-hvm-x86\_64-gp2"

}

module "vpc" {

source = "terraform-aws-modules/vpc/aws"

name = "my-vpc"

cidr = "10.0.0.0/16"

azs = ["us-east-1a"]

public\_subnets = ["10.0.1.0/24"]

}

resource "aws\_security\_group" "my-sg" {

vpc\_id = module.vpc.vpc\_id

name = join("\_", ["sg", module.vpc.vpc\_id])

dynamic "ingress" {

for\_each = var.rules

content {

from\_port = ingress.value["port"]

to\_port = ingress.value["port"]

protocol = ingress.value["proto"]

cidr\_blocks = ingress.value["cidr\_blocks"]

}

}

egress {

from\_port = 0

to\_port = 0

protocol = "-1"

cidr\_blocks = ["0.0.0.0/0"]

}

tags = {

Name = "Terraform-Dynamic-SG"

}

}

resource "aws\_instance" "my-instance" {

ami = data.aws\_ssm\_parameter.ami\_id.value

subnet\_id = module.vpc.public\_subnets[0]

instance\_type = "t3.micro"

security\_groups = [aws\_security\_group.my-sg.id]

user\_data = fileexists("script.sh") ? file("script.sh") : null

}

**Variables.tf:-**

variable "rules" {

type = list(object({

port = number

proto = string

cidr\_blocks = list(string)

}))

default = [

{

port = 80

proto = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

},

{

port = 22

proto = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

},

{

port = 3689

proto = "tcp"

cidr\_blocks = ["6.7.8.9/32"]

}

]

}

**Output.tf**

output "Web-Server-URL" {

description = "Web-Server-URL"

value = join("", ["http://", aws\_instance.my-instance.public\_ip])

}

output "Time-Date" {

description = "Date/Time of Execution"

value = timestamp()

}

**Script.sh:-**

#!/bin/bash

sudo yum -y install httpd

sudo systemctl start httpd && sudo systemctl enable httpd

Text

Description automatically generated

Text, application

Description automatically generated

Graphical user interface, text, application

Description automatically generated with medium confidence

Text

Description automatically generated