EXP 12

1. Create a role for ec2 instance with full access.

2.Launch and EC2 linux instance , get a key pair ,

Configure the network settings and add additional protocols and keep all traffic open and source type anywhere.

Edit the Advanced details and and the created role.

Save and launch the instance using mobaxterm.

3. Get SSH shell and enter the Specify username, remote host and attach your pem key file.

4. Get the root access by command “sudo su”.

Then create a directory

Then cd to that directory

5.sudo nano variables.tf

Or

nano variables.tf

Yellow things value will get changes according to your system and the blue are the code.

```
variable "aws_region" {
    description = "The AWS region to create things in."
    default     = "us-east-1”
}
variable "key_name" {
  description = " SSH keys to connect to ec2 instance"
  default     =  "[ Your PEM File Name without extension ]"
}
variable "instance_type" {
  description = "instance type for ec2"
  default     =  "t2.micro"
}
variable "security_group" {
  description = "Name of security group"
  default     = "my-jenkins-security-group"
}
variable "tag_name" {
  description = "Tag Name of for Ec2 instance"
```

```
  default     = "my-ec2-instance"
}
variable "ami_id" {
  description = "AMI for Ubuntu Ec2 instance"
  default     = "[ Select instance from portal ] "
```

For the Ami id Create another Ubuntu Ec2 instance but do not launch it , see details you might find AMI ID.

Now save it ctrl o + enter

nano main.tf

```
provider "aws" {
 region = var.aws_region
}

#Create security group with firewall rules
resource "aws_security_group" "security_jenkins_grp" {
 name        = var.security_group
 description = "security group for jenkins"

 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"]
 }

 # outbound from jenkis server
 egress {
```

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

 tags= {
  Name = var.security_group
 }
}

resource "aws_instance" "myFirstInstance" {
 ami           = var.ami_id
 key_name = var.key_name
 instance_type = var.instance_type
 security_groups= [var.security_group]
 tags= {
  Name = var.tag_name
 }
}

# Create Elastic IP address
resource "aws_eip" "myFirstInstance" {
 vpc      = true
 instance = aws_instance.myFirstInstance.id
tags= {
  Name = "jenkins_elastic_ip"
 }
}
```

Now save it ctrl o + enter

6.wget https://releases.hashicorp.com/terraform/1.5.0/terraform_1.5.0_linux_amd64.zip

Unzip terraform_1.5.0_linux_amd64.zip

cp terraform /bin/

check Terraform version by typing terraform --version

terraform init

7.terraform plan

terraform apply

if it ask for value then enter yes

8 **Final :** in aws check your instances you will find 2 instance linux (you created) and ubuntu (created through terraform).