**Tools required:** Terraform, AWS account with security credentials, Keypair

1. Set up terraform on the Simplilearn lab:

# sudo su -

# wget https://releases.hashicorp.com/terraform/1.4.6/terraform\_1.4.6\_linux\_amd64.zip

# unzip terraform\_1.4.6\_linux\_amd64.zip

# mv terraform /usr/local/bin

# terraform

2. Set up AWS User and its security credentials

Create an IAM user and create accesskey and secret key

In search box give IAM --> select IAM service

On left side click on USers and then click on ADD users

Give user name = terraform --> press next

Select Add exsiiting permission --> select Administrator accesss--> press next --> click on Create User

Add credentials to the USER in AWS

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Click on the user name terraform --> click on Security credentials --> scroll down to Access Key --> click on Create Access key

Select Command Line Interface (CLI) --> scroll down and check the box for I understand the above recommendation and want to proceed to create an access key.

Press next and click on create access key

Copy the access key and secret key

Accesskey : AKIAUJU24ZR3T63H6KDG

Secret key : 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

3. Create KeyPiars in AWS

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In search box --> give key pairs --> click on keypairs under features

Click on create key pair --> give name as project1

Key pair type ---> ED25519

Private key file format --> .pem

Click on Create key pair

**Expected Deliverables:**

* Launch an EC2 instance using Terraform
* Connect to the instance
* Install Jenkins, Java and Python in the instance

# mkdir myproject1

# cd myproject1

# vim terraformproject.tf

provider "aws" {

region = "us-east-1"

access\_key = "AKIAUJU24ZR3T63H6KDG"

secret\_key = "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"

}

save the file

Execute the command.

# terraform init

5. Launch an EC2 instance using Terraform

=================================================================

resource "aws\_security\_group" "test1" {

name = "test1"

description = "Allow inbound SSH"

ingress {

from\_port = 22

to\_port = 22

protocol = "tcp"

cidr\_blocks = ["0.0.0.0/0"]

ipv6\_cidr\_blocks = ["::/0"]

}

ingress {

description = "HTTP"

from\_port = 8080

to\_port = 8080

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"]

}

}

resource "aws\_instance" "web1" {

ami = "ami-005f9685cb30f234b"

instance\_type = "t2.micro"

tags = {

Name = "Project1"

}

key\_name = "project1"

user\_data = <<-EOF

#!/bin/bash

sudo yum install git -y

sudo amazon-linux-extras install java-openjdk11 -y

sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo

sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key

sudo yum install jenkins -y

sudo systemctl start jenkins

EOF

}

resource "aws\_network\_interface\_sg\_attachment" "sg\_attachment1" {

security\_group\_id = aws\_security\_group.test1.id

network\_interface\_id = aws\_instance.web1.primary\_network\_interface\_id

}

Execute command

# terrafrom apply

Enter yes





