

Week 9 assignment

Assignment

In this assignment, you will automatically create various AWS resources (Infrastructure as Code) using Terraform.

You will likely need to refer to the terraform AWS documentation to figure out how to do some of it. [Here](#) is the link.

Order doesn't matter in the terraform file so the ordering of my steps below is irrelevant. I created everything in a single tf file.

YOU SHOULD APPROPRIATELY TAG EACH RESOURCE (YOU DECIDE HOW)

Tasks

- Create a new vpc `tf-vpc`
 - cidr block should be 10.0.0.0/16
- Create a new subnet `tf-subnet`
 - cidr block is 10.0.1.0/24
- Create a new security group `tf-sg`
 - should allow all incoming traffic to ports 80 and 22
 - should allow all outgoing traffic
- Create an internet gateway `tf-ig` and attach it to your vpc. (Hint: `vpc_id = aws_vpc.tf-vpc.id`)
- Create a route table `tf-r` and attach to your vpc.
 - the cidr block should be `0.0.0.0/0`
 - the gateway id should point to the aforementioned `tf-ig`
- You need to create a `aws_route_table_association` to associate your route table with your subnet. The documentation will help.
- Create an `aws_key_pair` named `tf-key`. You will have to give it a public key. If you are doing this on the ssh machine, you should already have a public key in `~/.ssh/id_rsa.pub`, use that for the `public_key` argument for this resource. If you do not already have a public key on the machine you are running terraform from, you can generate one by doing `ssh-keygen`.
- Create 3 separate ec2 instances `dev`, `test`, and `prod`. I used separate resource definitions for each.
 - Each should use an appropriate ubuntu AMI
 - t2.micro
 - associate the aforementioned `tf-sg` with each instance
 - `associate_public_ip_address` should be set to true
 - `key_name` should be set to your previously created key `tf-key`.
 - associate the instance with the subnet you created.
 - The user data for each instance should consist of [this](#) file.
- You should have a line that outputs the public ip address of each machine (so 3 in total)
- When you run `terraform apply` successfully, you should be able to ssh to each of your virtual machines with something like `ssh ubuntu@54.165.61.116`. You should also be able to visit port 80 of each machine in a browser to see if a webpage is showing.

To pass off

Pass off in class or via office hours. Or I guess you could record a video of things working and cat out your tfstate file.