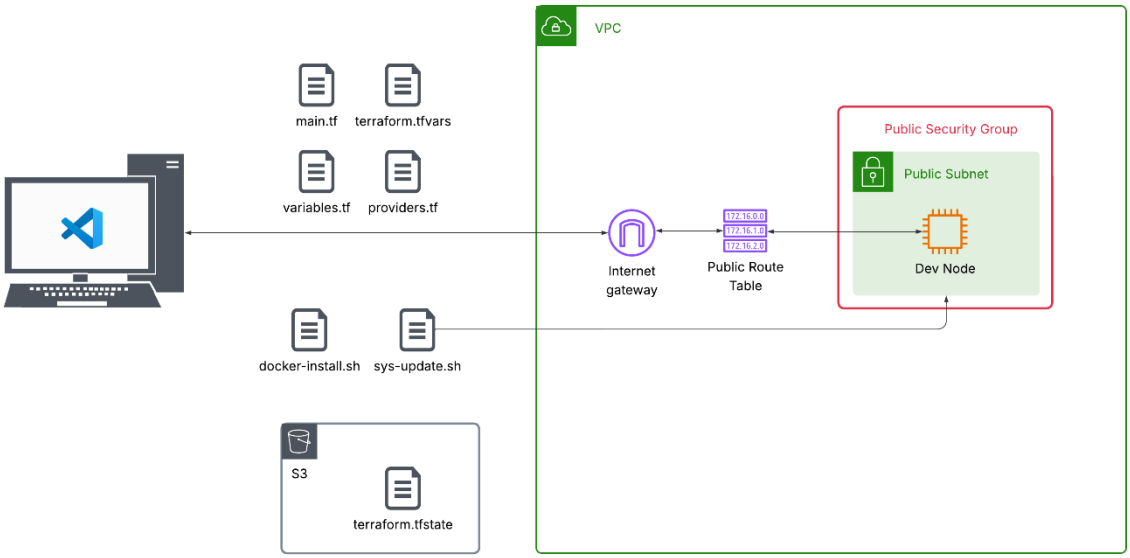
Terraform Practice

Create an AWS User with Console Access, we will use this to verify in the GUI the creation of resources. You should also create Access Key for CLI, this is how we are going to create everything in our AWS Account with the TF files.

Use Visual Studio Code for this exercise. You will use the extensions for Terraform (make sure it's the official HashiCorp extension) and AWS Toolkit (Make sure it's the official Amazon one).

To create your infrastructure, follow these instructions together with the AWS Terraform Registry Documentation, because all the required code and descriptions are there.

Infrastructure Diagram



Instructions First Challenge:

1. Do not use the root account. Create a new AWS User to handle this task
2. You should end up with at least 4 terraform files (main.tf, providers.tf, variables.tf, terraform.tfvars)
3. You should have at least 5 variables.
4. These are some of the resources you should have: IAM (users and permissions as needed), VPC, Subnet, Internet Gateway, Route Table, Route, Table Association, Security Groups, EC2 Instance
5. Create a prefix for the resource tags. Follow the naming convention of first letter of your first name, first 2 letters from your last name and a hyphen. e.g. Linus Torvalds = "ltr-"
6. Each resource should have a tag that references what resource it is. For example, "igw" for Internet Gateway and should be after the prefix
7. For VPC use the following CIDR block: 10.123.0.0/16

    a. Other resources will be dependent on that CIDR block
    b. Enable DNS hostnames and DNS Support
8. From Terraform print the ID of each resource created
9. As you create your infrastructure, you can check the console to see your resources from the GUI
10. You should connect to your EC2 instance from your laptop using AWS SSM
11. Inside your instance create a file from the contents of docker-install.txt
12. Run the file you created
13. Enable Remote State with a S3 bucket

GOOD LUCK!

IMPORTANT CONSIDERATIONS:

Make sure you create a Billing Alert and a Budget; despite having the Free Trial enabled this is a failsafe (No points added for this)

Tags are the way to add names to the AWS resources; these will be visible from the AWS Console.

Remember: the names we add to the resource block are our way of managing resources in TF and will not show up in AWS Console.

Check the registry documentation and other sources if you encounter errors.

Keep everything organized!