# **Building an AWS Terraform VPC Step-by-Step**

AWS Virtual Private Cloud (VPC) :: The AWS cloud has dozens of various services from compute, storage, networking, and more. Each of these services can communicate with each other just like an on-prem datacenter’s services. But, each of these services is independent of one another, and they are not necessarily isolated from other services. The AWS VPC changes that.

An AWS VPC is a single network that allows you to launch AWS services within a single isolated network. Technically, an AWS VPC is almost the same as owning a datacenter but with built-in additional benefits of scalability, fault-tolerance, unlimited storage, etc.

AWS VPCs are restricted by region. You cannot have one VPC spanning across regions with up to five VPCs supported per region.



To start, create a folder(terraform-vpc-demo) to store your Terraform configuration

Create main.tf file.

* Creates a VPC
* Creates an Internet Gateway and attaches it to the VPC to allow traffic within the VPC to be reachable by the outside world.
* Creates a public and private subnet
* Creates a route table for the public and private subnets and associates the table with both subnets
* Creates a NAT Gateway to enable private subnets to reach out to the internet without needing an externally routable IP address assigned to each resource

Create vars.tf file

* var.region
* var.main\_vpc\_cidr
* var.public\_subnets
* var.private\_subnets

Create provider.tf file

* provider "aws" { region = "us-east-2" }

create terraform.tfvars file with the below values

* main\_vpc\_cidr = "10.0.0.0/24"
* public\_subnets = "10.0.0.128/26"
* private\_subnets = "10.0.0.192/26"

you should have below files



Once the above code is created

Run terraform comments “init,plan,validate,apply”