

-The Terraform file proceed by naming the AWS providers and configuring the region variable to a value entered in separate variable file.

-The terraform/vpc/aws source and version 3.11.0 are then used to instantiate the VPC module.

This section accepts a number of variables, including the VPC name, CIDR block, availability zones, and public and private subnet IDs. A NAT gateway is also enabled, and a database subnet group and security group are created by the module.

-The terraform/ec2-instance/aws source and version 3.0.0 are then used to instantiate the EC2 module.

The EC2 instance name, Amazon Machine Image (AMI), instance type, security group ID, subnet ID, key name, root block device configuration, and EBS block device configuration are all variables that the module takes.

-The file starts with finding the AWS provider and setting the region variable to a value given in a separate variable file. (variable.tf)

-The terraform/vpc/aws source and version 3.11.0 are then used to generate the VPC module. This part accepts a number of variables, including the VPC name, CIDR block, availability zones, and public and private subnet IDs. The module also fires up a NAT gateway and creates a database subnet group and a security group.

The terraform/ec2-instance/aws source and version 3.0.0 are then used to instantiate the EC2 module. The EC2 instance name, Amazon Machine Image (AMI), instance type, security group ID, subnet ID, key name, root block device configuration, and EBS block device configuration are all variables that the module accepts.

-The terraform-aws-modules/alb/aws source and version 5.5.0 are the used to launch the ALB module.

Many variables are sent to the module, including the ALB name, type, security group ID, and subnet IDs.

The module also enables HTTP/2 and provides an ALB target group.

-The terraform-aws-modules/rds/aws source and version 3.3.0 are then used to generate the RDS package.

The RDS instance identification, database engine, engine version, instance class, allotted storage, security group ID, subnet IDs, multiAZ deployment, database name, master username, and master password are all variables that the package takes. This package also assigns a name to the RDS instance.

Lastly, 2 Route53 records are generated for the EC2 instance and ALB using the aws_route53_record resource type.

The probable variable.tf and aws_resource.tf files are attached along with this documents for your reference.