TERRAFORM SCRIPT TO CREATE

INFRASTRUCTURE IN AWS

Vpc | 3 Subnets Setup In 3 Different az | 2 Instances Setup In 2 Different Subnets

SCRIPT

sivathamil@sivathamil: ~/terra-f

```
terraform -
  required_providers {
    aws ={
      source = "hashicorp/aws"
 required_version = ">= 1.2.0"
provider "aws"{
  region = "ap-south-1"
resource "aws_vpc" "task_vpc" {
    cidr_block = "10.0.0.0/16"
  enable_dns_support = true
  enable dns hostnames = true
  tags = {
    Name = "task_vpc"
```

sivathamil@sivathamil: ~/terra-f

```
= aws_vpc.task_vpc.id
 vpc id
 cidr_block = "10.0.1.0/24"
availability_zone = "ap-south-1a"
 map_public_ip_on_launch = true
 tags = {
  Name = "task-subnet a"
resource "aws_subnet" "task-subnet_b"
map public ip on launch = true
 tags = {
  Name = "task-subnet b"
resource "aws_subnet" "task-subnet_c" {
map public ip on launch = true
 tags = {
  Name = "task-subnet c"
instance type = "t2.micro"
 subnet_id = aws_subnet.task-subnet_a.id
 tags = {
  Name = "task-zen-01"
instance_type = "t2.micro"
 subnet id = aws subnet.task-subnet b.id
 tags = {
  Name = "task-zen-02"
```

AWS CONFIGURE

Install AWS CLI

- Open a Terminal or Command Prompt
- Run aws configure
- Enter AWS Access Key ID
- Enter AWS Secret Access
 Key
- Specify Default Region

TERRAFORM INIT

```
sivathamil@sivathamil: ~/terra-f
sivathamil@sivathamil:~/terra-f$
sivathamil@sivathamil:~/terra-f$
sivathamil@sivathamil:~/terra-f$ vi zen-task.tf
sivathamil@sivathamil:~/terra-f$ terraform init
Initializing the backend...
Initializing provider plugins...
  Reusing previous version of hashicorp/aws from the dependency lock file
 Using previously-installed hashicorp/aws v4.67.0
Terraform has been successfully initialized!
You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.
 f you ever set or change modules or backend configuration for Terraform,
erun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
```

```
TERRAFORM PLAN
sivathamil@sivathamil: ~/terra-f
  vathamil@sivathamil:~/terra-f$ terraform plan
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
Terraform will perform the following actions:
  # aws_instance.task-zen-01 will be created
    resource "aws instance" "task-zen-01" {
                                                  = "ami-03f4878755434977f"
      + ami
      + arn
                                                  = (known after apply)
                                                                                            sivathamil@sivathamil: ~/terra-f
      + associate public ip address
                                                  = (known after apply)
                                                                                             # aws_subnet.task-subnet_a will be created
      + availability zone
                                                  = (known after apply)
                                                                                             + resource "aws subnet" "task-subnet a" {
      + cpu core count
                                                  = (known after apply)
                                                                                                                                        = (known after apply)
      + cpu threads per core
                                                  = (known after apply)

    availability_zone

                                                                                                                                        = "ap-south-1a"
      + disable api stop
                                                  = (known after apply)
                                                                                                 + availability zone id
                                                                                                                                        = (known after apply)
      + disable_api_termination
                                                  = (known after apply)
                                                                                                                                        = "10.0.1.0/24"

    cidr block

       ebs optimized
                                                  = (known after apply)
                                                                                                 enable dns64
                                                                                                                                        = false
                                                                                                  enable_resource_name_dns_a_record_on_launch

    get password data

                                                  = false
                                                                                                 enable resource name dns aaaa record on launch = false
                                                  = (known after apply)
      + host id
                                                                                                                                        = (known after apply)
                                                                                                 ipv6 cidr block association id
                                                                                                                                        = (known after apply)
      + host_resource_group_arn
                                                  = (known after apply)
                                                                                                 ipv6 native
                                                                                                                                        = false
                                                  = (known after apply)
      + iam instance profile
                                                                                                  map_public_ip_on_launch
                                                  = (known after apply)
                                                                                                                                        = (known after apply)
                                                                                                 private dns hostname type on launch
                                                                                                                                        = (known after apply)
      + instance initiated shutdown behavior = (known after apply)
      + instance state
                                                  = (known after apply)
                                                                                                     "Name" = "task-subnet a"
      + instance type
                                                  = "t2.micro"
                                                                                                  tags_all
      + ipv6 address count
                                                  = (known after apply)
                                                                                                      "Name" = "task-subnet a"

    ipv6 addresses

                                                  = (known after apply)
                                                                                                                                        = (known after apply)
                                                  = (known after apply)
       + key_name
       monitoring
                                                  = (known after apply)
       + outpost arn
                                                  = (known after apply)
                                                                                             # aws_subnet.task-subnet_b will be created
                                                                                             + resource "aws_subnet" "task-subnet b" {
        password data
                                                  = (known after apply)
                                                                                                                                        = (known after apply)
       placement group
                                                  = (known after apply)
                                                                                                 + availability_zone
                                                                                                                                        = "ap-south-1b"

    placement partition number

                                                  = (known after apply)
                                                                                                 + availability zone id
                                                                                                                                        = (known after apply)
       + primary_network_interface id
                                                  = (known after apply)
                                                                                                                                        = "10.0.2.0/24"
       + private dns
                                                  = (known after apply)
                                                                                                                                        = false
                                                                                                 enable_resource_name_dns_a_record_on_launch
       private ip
                                                  = (known after apply)
                                                                                                 enable resource name dns aaaa record on launch = false
       + public dns
                                                  = (known after apply)
                                                                                                                                        = (known after apply)
       + public ip
                                                  = (known after apply)
                                                                                                 ipv6_cidr_block_association_id
                                                                                                                                        = (known after apply)
                                                                                                  ipv6_native
                                                                                                                                        = false
      + secondary_private_ips
                                                  = (known after apply)
                                                                                                  map_public_ip_on_launch
      + security groups
                                                  = (known after apply)
                                                                                                                                        = (known after apply)
                                                                                                 private dns hostname type on launch
                                                                                                                                        = (known after apply)

    source dest check

                                                  = true
      + subnet id
                                                  = (known after apply)
                                                                                                     "Name" = "task-subnet b"
                                                                                                  tags_all
             "Name" = "instance_a"
                                                                                                      "Name" = "task-subnet b"
       + tags all
                                                                                                                                        = (known after apply)
```

= (known after apply)

"Name" = "instance a"

tenancy

```
sivathamil@sivathamil: ~/terra-f
                                                                           sivathamil@sivathamil: ~/terra-f
  # aws_instance.task-zen-01 will be created
   resource "aws_instance" "task-zen-01"
                                                                                resource "aws instance" "task-zen-02"
                                              "ami-03f4878755434977f
                                             = (known after apply)
       associate public in address
                                             = (known after apply
                                                                                  associate public ip address
                                             = (known after apply)
       availability zone
       cou core count
                                             = (known after apply
       cpu_threads_per_core
                                             = (known after apply)
                                                                                   cpu_threads_per_core
       disable_api_stop
                                             = (known after apply)
                                                                                  disable ani termination
       ebs_optimized
                                              = (known after apply)
                                                                                  ebs optimized
                                                                                   get password data
                                             = (known after apply)
                                             = (known after apply)
       iam instance profile
                                             = (known after apply
                                             = (known after apply
       instance initiated shutdown behavior = (known after apply
                                                                                   instance initiated shutdown behavior = (known after apply
       instance state
                                             = (known after apply
                                                                                   instance state
                                              = "t2.micro
       instance type
                                                                                   instance_type
       ipv6 address count
                                             = (known after apply)
                                             = (known after apply
                                                                                   ipv6_addresses
                                              = (known after apply
                                                                                   key_name
                                             = (known after apply
                                                                                  monitoring
                                             = (known after apply
       outpost arr
                                                                                   outpost arn
       password data
                                                                                   password_data
       placement_group
                                                                                   placement_group
                                             = (known after apply
       placement partition number
       primary network interface id
                                             = (known after apply
                                                                                   primary_network_interface_id
       private dns
                                             = (known after apply
       private ip
                                             = (known after apply
                                                                                  private_ip
public dns
       public_dns
                                             = (known after apply
       public_ip
                                             = (known after apply)
                                                                                   secondary_private_ips
                                             = (known after apply)
       security_groups
                                            = (known after apply)
       subnet id
                                                                                   subnet id
                                                                                   tags

+ "Name" = "task-zen-02"
                                                                                   tags_all
                                                                                       "Name" = "task-zen-02"
            "Name" = "task-zen-01"
                                             = (known after apply)
                                                                                   tenancy
                                             = (known after apply)
                                                                                  user data
                                                                                  user_data_base64
                                             = (known after apply)
                                                                                  user_data_replace_on_change
                                                                                   vpc security group ids
                                            = (known after apply
       vpc_security_group_ids
                                                                           sivathamil@sivathamil: -/terra-f
```

```
sivathamil@sivathamil: ~/terra-f
  # aws_subnet.task-subnet_c will be o
                                                        = (known after apply)
       assign ipv6 address on creation
                                                        = (known after apply)
= "10.0.3.0/24"
       cidr block
       enable dns64
       enable resource name dns aaaa record on launch = false
                                                        = (known after apply
        ipv6_cidr_block_association_id
                                                        = (known after apply
       map_public_ip_on_launch
                                                        = (known after apply
           "Name" = "task-subnet c"
       tags all
            "Name" = "task-subnet c"
       vpc id
                                                        = (known after apply)
  aws vpc.task vpc will be created
   resource "aws vpc" "task vpc" |
                                              = (known after apply)
      + cidr block
                                              = "10.0.0.0/16"
      - default network acl id
                                              = (known after apply
       default_route_table_id
                                              (known after apply)
       default security group is
                                              = (known after apply
       enable classiclink
                                              = (known after apply
       enable_classiclink_dns_support
        enable_dns_hostnames
       enable dns support
       enable network address usage metrics = (known after apply)
                                              = (known after apply)
                                               "default"
        ipv6 association id
                                              = (known after apply
       ipv6_cidr_block
                                              = (known after apply
       ipv6 cidr block_network_border_group = (known after apply
                                               (known after apply
       tags all
```

```
enable resource name dns aaaa record on launch = false
     ipv6_cidr_block_association_id
    map_public_ip_on_launch
                                                    = (known after apply
    private dns hostname type on launch
                                                    = (known after app)
        "Name" = "task-subnet_c"
    tags_all
         "Name" = "task-subnet c"
                                                    = (known after apply
# aws_vpc.task_vpc will be created
 resource "aws vpc" "task vpc"
                                          = (known after apply)
                                          = "10.0.0.0/16"
   default_network_acl_id
                                          = (known after apply)
    default_route_table_id
                                           (known after apply)
    dhcp options id
                                          = (known after apply)
    enable classiclink
                                          = (known after apply
    enable_classiclink_dns_support
                                         = (known after apply)
    enable dns hostnames
    enable_dns_support
                                         = (known after apply)
= "default"
    instance tenancy
    ipv6_association_id
                                          = (known after apply)
    ipv6 cidr block
                                          = (known after apply)
    ipv6_cidr_block_network_border_group = (known after apply)
    main_route_table_id
                                          = (known after apply)
         "Name" = "task vpc"
    tags all
an: 6 to add, 0 to change, 0 to destroy
```

"ami-03f4878755434977

= (known after apply

= (known after apply)

= (known after apply)

= (known after apply

= (known after apply

= (known after apply)

= (known after apply

= "t2.micro"

TERRAFORM APPLY

```
sivathamil@sivathamil: ~/terra-f
  ivathamil@sivathamil:~/terra-f$ terraform apply
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
Terraform will perform the following actions:
  # aws instance.task-zen-01 will be created
   resource "aws instance" "task-zen-01" {
                                             = "ami-03f4878755434977f"
      + ami
                                             = (known after apply)
      + arn
      + associate_public_ip_address
                                             = (known after apply)
      + availability zone
                                             = (known after apply)
      + cpu core count
                                             = (known after apply)
      + cpu threads per core
                                             = (known after apply)
      + disable api stop
                                             = (known after apply)
      + disable api termination
                                             = (known after apply)
                                             = (known after apply)
      + ebs optimized
      + get_password data
                                             = false
      + host id
                                             = (known after apply)
      + host resource group arn
                                             = (known after apply)
      + iam instance profile
                                             = (known after apply)
                                             = (known after apply)
      + instance initiated shutdown behavior = (known after apply)
      + instance state
                                             = (known after apply)
      + instance type
                                             = "t2.micro"
      + ipv6 address count
                                             = (known after apply)
      + ipv6 addresses
                                             = (known after apply)
      + kev name
                                             = (known after apply)
       monitoring
                                             = (known after apply)
                                             = (known after apply)
      + outpost arn
      + password data
                                             = (known after apply)
      + placement group
                                             = (known after apply)
      + placement partition number
                                             = (known after apply)
      + primary_network_interface_id
                                             = (known after apply)
      + private dns
                                             = (known after apply)
      + private ip
                                             = (known after apply)
      + public dns
                                             = (known after apply)
      + public ip
                                             = (known after apply)
      + secondary private ips
                                             = (known after apply)
      + security groups
                                             = (known after apply)
      + source dest check
                                             = true
      + subnet id
                                             = (known after apply)
            "Name" = "task-zen-01"
      + tags all
            "Name" = "task-zen-01"
       tenancy
                                             = (known after apply)
```

```
sivathamil@sivathamil: ~/terra-f
      + enable dns support
                                             = true
      + enable network address usage metrics = (known after apply)
                                             = (known after apply)
     + instance tenancy
                                             = "default"
     + ipv6 association id
                                             = (known after apply)
     + ipv6 cidr block
                                             = (known after apply)
     + ipv6 cidr block network border group = (known after apply)
      + main route table id
                                             = (known after apply)
      + owner id
                                             = (known after apply)
      + tags
                                             = {
           "Name" = "task_vpc"
     + tags_all
                                             = {
          + "Name" = "task vpc"
Plan: 6 to add, 0 to change, 0 to destroy.
Do you want to perform these actions?
 Terraform will perform the actions described above.
 Only 'ves' will be accepted to approve.
 Enter a value: yes
aws vpc.task vpc: Creating...
aws_vpc.task_vpc: Still creating... [10s elapsed]
aws_vpc.task_vpc: Creation complete after 11s [id=vpc-034a46c93315a9612]
aws subnet.task-subnet c: Creating...
aws subnet.task-subnet a: Creating...
aws subnet.task-subnet b: Creating...
aws_subnet.task-subnet_c: Still creating... [10s elapsed]
aws subnet.task-subnet b: Still creating... [10s elapsed]
aws subnet.task-subnet a: Still creating... [10s elapsed]
aws subnet.task-subnet c: Creation complete after 11s [id=subnet-0937a40b8d0e67ef2]
aws subnet.task-subnet b: Creation complete after 11s [id=subnet-0f4c6a499834677eb]
aws subnet.task-subnet a: Creation complete after 11s [id=subnet-02c95b81272fe02ad]
aws instance.task-zen-01: Creating...
aws instance.task-zen-02: Creating...
aws instance.task-zen-02: Still creating... [10s elapsed]
aws instance.task-zen-01: Still creating... [10s elapsed]
aws instance.task-zen-01: Still creating... [20s elapsed]
aws_instance.task-zen-02: Still creating... [20s elapsed]
aws instance.task-zen-02: Still creating... [30s elapsed]
aws instance.task-zen-01: Still creating... [30s elapsed]
aws instance.task-zen-02: Creation complete after 32s [id=i-0a2c25cca53b8c679]
aws instance.task-zen-01: Still creating... [40s elapsed]
aws instance.task-zen-01: Creation complete after 42s [id=i-0365c888b338697c5]
 oply complete! Resources: 6 added, 0 changed, 0 destroyed.
```

TERRAFORM SHOW

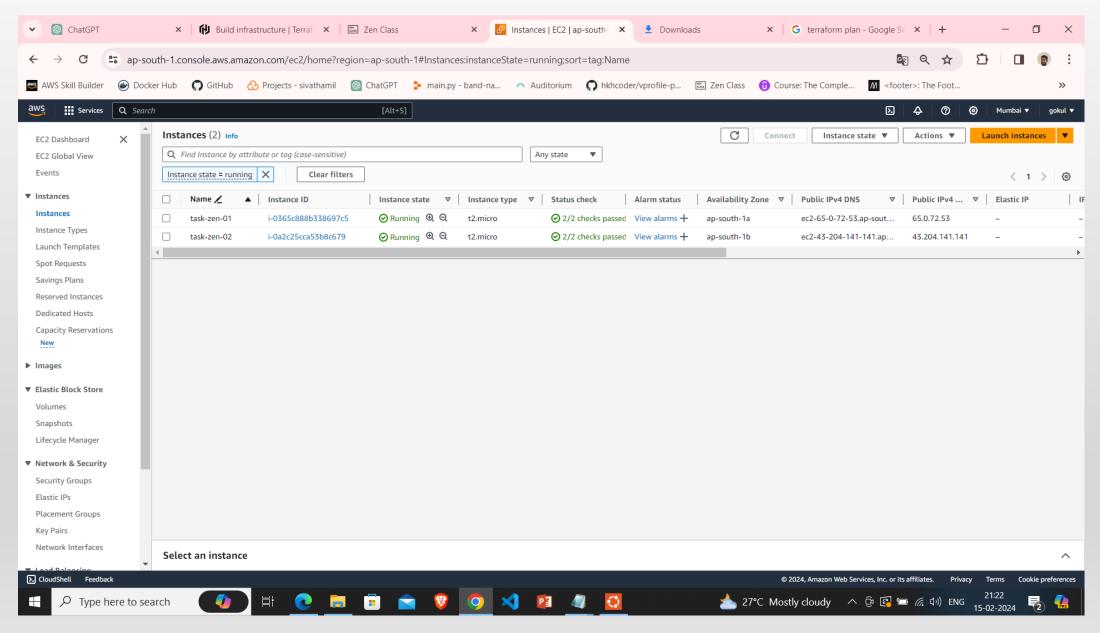
```
sivathamil@sivathamil: ~/terra-f
```

```
/athamil@sivathamil:~/terra-f$ terraform show
 aws instance.task-zen-01:
resource "aws_instance" "task-zen-01" {
  ami
                                        = "ami-03f4878755434977f"
                                       = "arn:aws:ec2:ap-south-1:488546547125:instance/i-0365c888b338697c5"
  associate_public_ip_address
  availability zone
                                       = "ap-south-1a"
  cpu core count
                                       = 1
  cpu_threads_per_core
                                       = 1
  disable_api_stop
                                       = false
  disable api termination
                                       = false
  ebs optimized
                                       = false
  get password data
                                       = false
  hibernation
                                       = false
                                       = "i-0365c888b338697c5"
  instance initiated shutdown behavior = "stop"
  instance state
                                       = "running"
                                       = "t2.micro"
  instance type
  ipv6 address count
                                       = 0
  ipv6 addresses
  monitoring
                                       = false
  placement_partition_number
                                       = 0
  primary network interface id
                                       = "eni-0575a502b96993666"
  private dns
                                       = "ip-10-0-1-138.ap-south-1.compute.internal"
  private ip
  public dns
                                       = "ec2-65-0-72-53.ap-south-1.compute.amazonaws.com"
  public_ip
                                       = "65.0.72.53"
  secondary_private_ips
  security groups
  source dest check
                                       = true
  subnet id
                                       = "subnet-02c95b81272fe02ad"
  tags
       "Name" = "task-zen-01"
  tags all
       "Name" = "task-zen-01"
                                       = "default"
  tenancy
  user_data_replace_on_change
                                       = false
  vpc_security_group_ids
       "sg-0a1bc3cf320792bb0",
  capacity_reservation_specification {
      capacity_reservation_preference = "open"
  cpu_options {
```

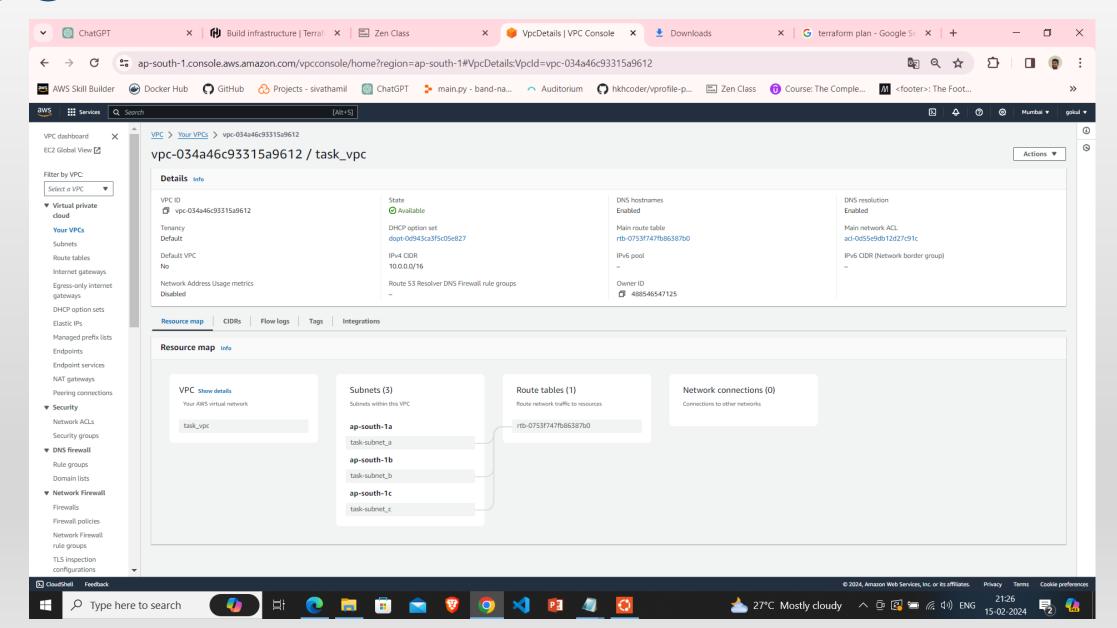
```
sivathamil@sivathamil: ~/terra-f
   tags all
       "Name" = "task-subnet c"
   vpc id
                                                   = "vpc-034a46c93315a9612"
 aws vpc.task vpc:
resource "aws vpc" "task vpc" {
                                         = "arn:aws:ec2:ap-south-1:488546547125:vpc/vpc-034a46c93315a9612"
   assign_generated_ipv6_cidr_block
                                        = false
   cidr block
                                        = "10.0.0.0/16"
   default network acl id
                                        = "acl-0d55e9db12d27c91c"
   default route table id
                                        = "rtb-0753f747fb86387b0"
   default security group id
                                        = "sg-0a1bc3cf320792bb0"
   dhcp options id
                                        = "dopt-0d943ca3f5c05e827"
   enable classiclink
                                        = false
   enable classiclink dns support
                                        = false
                                        = true
   enable dns hostnames
   enable dns support
                                        = true
   enable_network_address_usage_metrics = false
                                        = "vpc-034a46c93315a9612"
                                        = "default"
   instance tenancy
   ipv6 netmask length
                                        = 0
                                        = "rtb-0753f747fb86387b0"
   main route table id
   owner id
                                        = "488546547125"
   tags
       "Name" = "task vpc"
   tags_all
                                         = {
       "Name" = "task_vpc"
 .vathamil@sivathamil:~/terra-f$ terraform state list
aws instance.task-zen-01
aws instance.task-zen-02
aws subnet.task-subnet a
aws subnet.task-subnet b
aws subnet.task-subnet c
aws vpc.task vpc
```

TERRAFORM STATE LIST

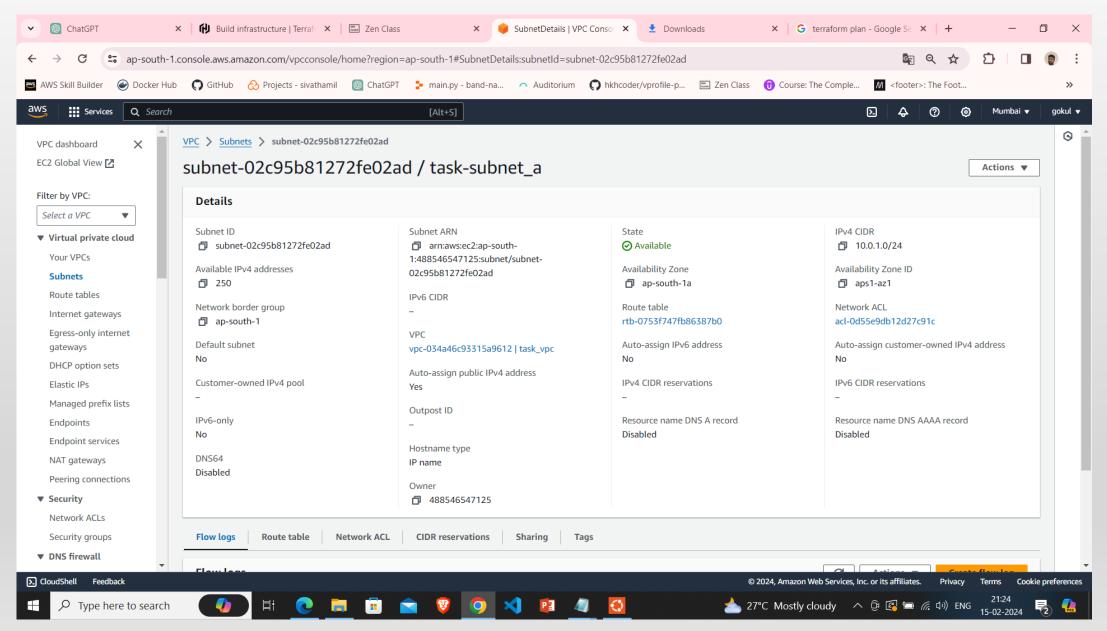
INSTANCES

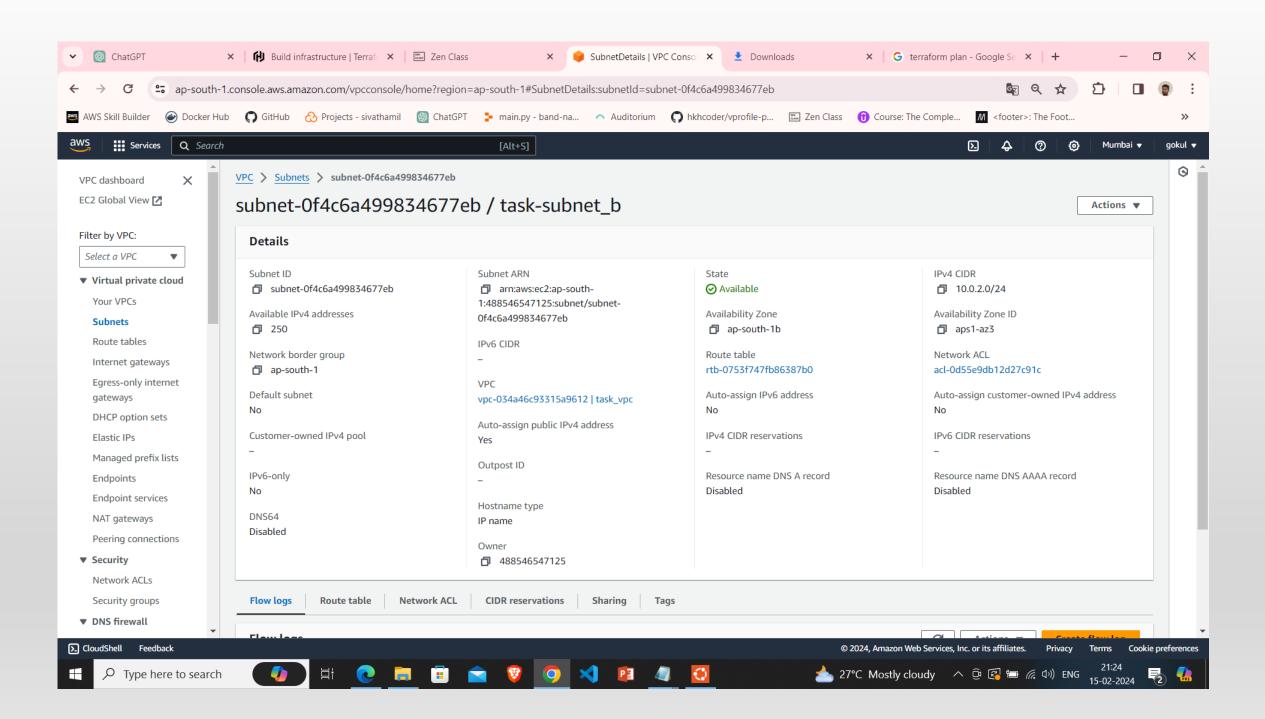


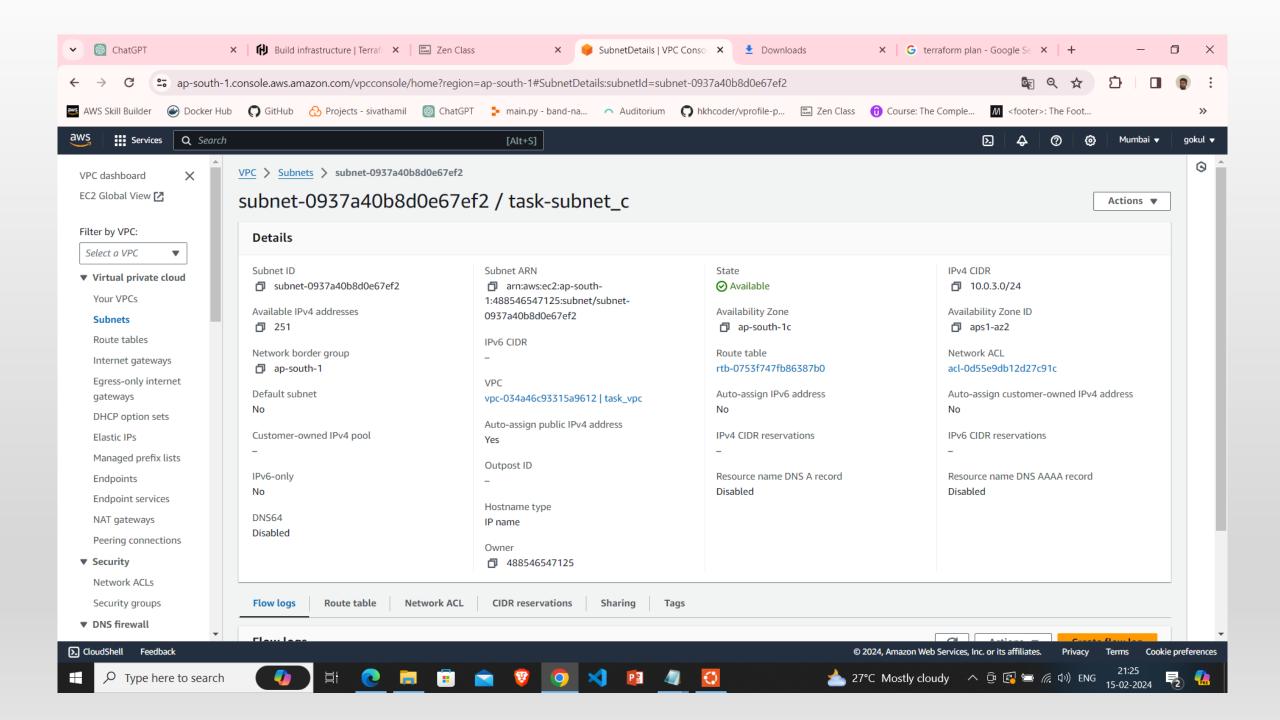
VPC



SUBNETS SETUP IN 3 DIFFERENT AZ







Thank You....