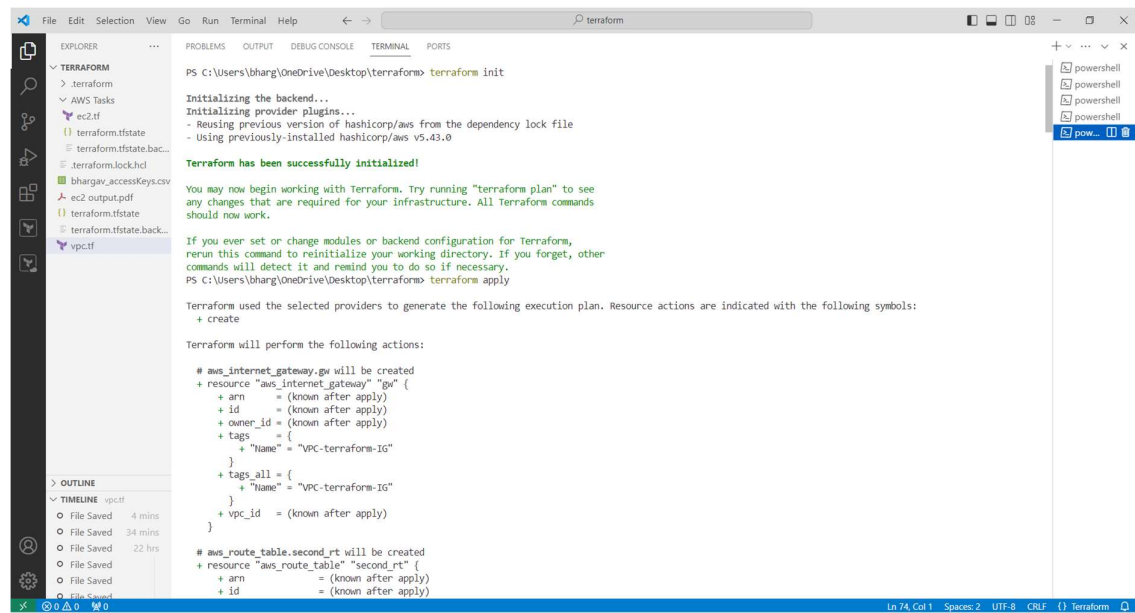


Terraform init:



```
PS C:\Users\bharg\OneDrive\Desktop\terraform> terraform init

Initializing the backend...
Initializing provider plugins...
- Reusing previous version of hashicorp/aws from the dependency lock file
- Using previously-installed hashicorp/aws v5.43.0

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.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.
PS C:\Users\bharg\OneDrive\Desktop\terraform> terraform apply

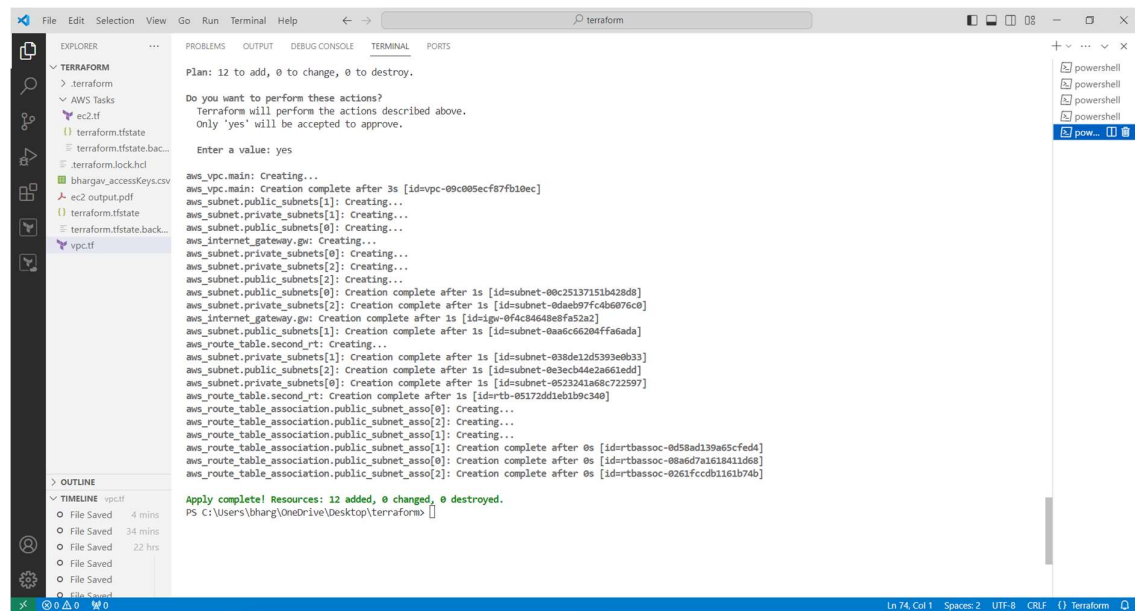
Terraform used the selected providers to generate the following execution plan. Resource actions are indicated with the following symbols:
+ create

Terraform will perform the following actions:

# aws_internet_gateway.gw will be created
+ resource "aws_internet_gateway" "gw" {
  + arn      = (known after apply)
  + id       = (known after apply)
  + owner_id = (known after apply)
  + tags     = {
    + "Name" = "vpc-terraform-IG"
  }
  + tags_all = {
    + "Name" = "vpc-terraform-IG"
  }
  + vpc_id   = (known after apply)
}

# aws_route_table.second_rt will be created
+ resource "aws_route_table" "second_rt" {
  + arn      = (known after apply)
  + id       = (known after apply)
```

Terraform apply:



```
Plan: 12 to add, 0 to change, 0 to destroy.

Do you want to perform these actions?
Terraform will perform the actions described above.
Only 'yes' will be accepted to approve.

Enter a value: yes

aws_vpc.main: Creating...
aws_vpc.main: Creation complete after 3s [id=vpc-09c005ecf87fb10ec]
aws_subnet.public_subnets[1]: Creating...
aws_subnet.private_subnets[1]: Creating...
aws_subnet.public_subnets[0]: Creating...
aws_internet_gateway.gw: Creating...
aws_subnet.private_subnets[0]: Creating...
aws_subnet.private_subnets[2]: Creating...
aws_subnet.public_subnets[2]: Creating...
aws_subnet.public_subnets[0]: Creation complete after 1s [id=subnet-00c2513715b428d9]
aws_subnet.private_subnets[2]: Creation complete after 1s [id=subnet-0dae097fc4b6076c0]
aws_internet_gateway.gw: Creation complete after 1s [id=igw-0fac84648e8fa52a2]
aws_subnet.public_subnets[1]: Creation complete after 1s [id=subnet-0aa6c66204ffa6ada]
aws_route_table.second_rt: Creating...
aws_subnet.private_subnets[1]: Creation complete after 1s [id=subnet-038de12d5393e0b33]
aws_subnet.public_subnets[2]: Creation complete after 1s [id=subnet-0e3ecb44e2a661edd]
aws_subnet.private_subnets[0]: Creation complete after 1s [id=subnet-0523241a68c722597]
aws_route_table.second_rt: Creation complete after 1s [id=rtb-05172dd1eb1b0c340]
aws_route_table_association.public_subnet_asso[0]: Creating...
aws_route_table_association.public_subnet_asso[2]: Creating...
aws_route_table_association.public_subnet_asso[1]: Creation complete after 0s [id=rtbassoc-0d58ad139a65cfed4]
aws_route_table_association.public_subnet_asso[0]: Creation complete after 0s [id=rtbassoc-08a6d7a1618411d68]
aws_route_table_association.public_subnet_asso[2]: Creation complete after 0s [id=rtbassoc-0261fccdb1161b74b]

Apply complete! Resources: 12 added, 0 changed, 0 destroyed.
PS C:\Users\bharg\OneDrive\Desktop\terraform>
```

When VPC is created and a main Route table is also created, it defines a default route that the components in the VPC communicate with each other internally. (So the route table created is called “main route table”).

The screenshot shows the AWS VPC console interface. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC resources. The main content area displays the details for the VPC 'vpc-09c005ecf87fb10ec'. The 'Details' tab is active, showing a table with key attributes:

Attribute	Value
VPC ID	vpc-09c005ecf87fb10ec
State	Available
Tenancy	Default
Default VPC	No
Network Address Usage metrics	Disabled
DHCP option set	dopt-05dfc90cedc40b6a9
IPv4 CIDR	10.0.0.0/16
Route 53 Resolver DNS Firewall rule groups	
DNS hostnames	Disabled
Main route table	rtb-027994315db14cfe6
IPv6 pool	-
Owner ID	905418122780
DNS resolution	Enabled
Main network ACL	acl-01b63f6176474cc3a
IPv6 CIDR (Network border group)	-

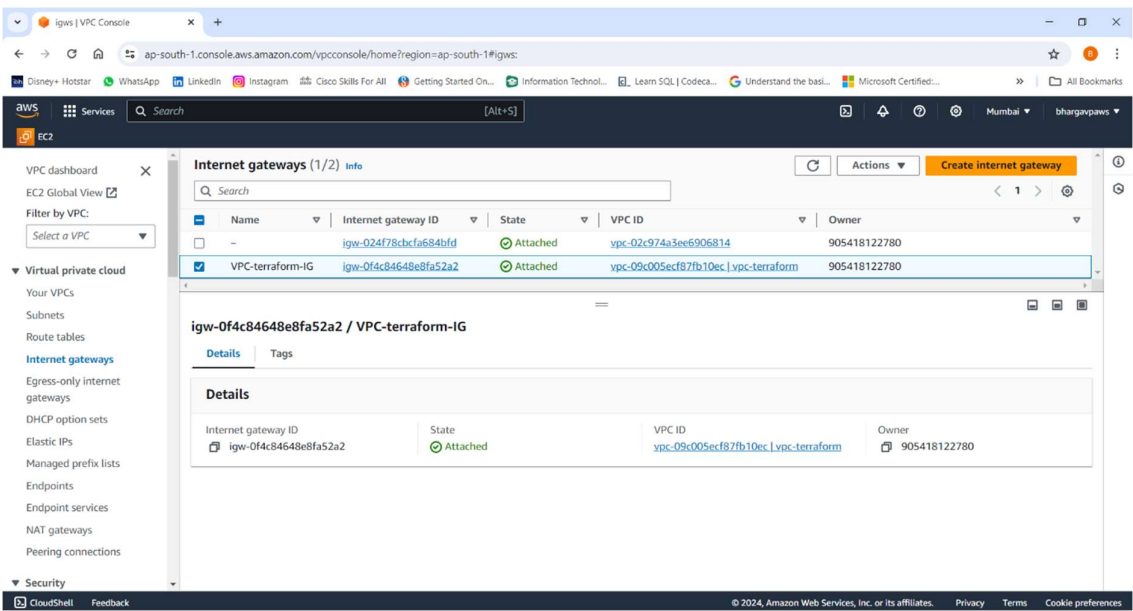
Subnets:

The screenshot shows the AWS VPC console interface for subnets. The left sidebar contains navigation links for VPC dashboard, EC2 Global View, and various VPC resources. The main content area displays the details for the subnets within the VPC 'vpc-09c005ecf87fb10ec'. The 'Subnets' tab is active, showing a table with key attributes:

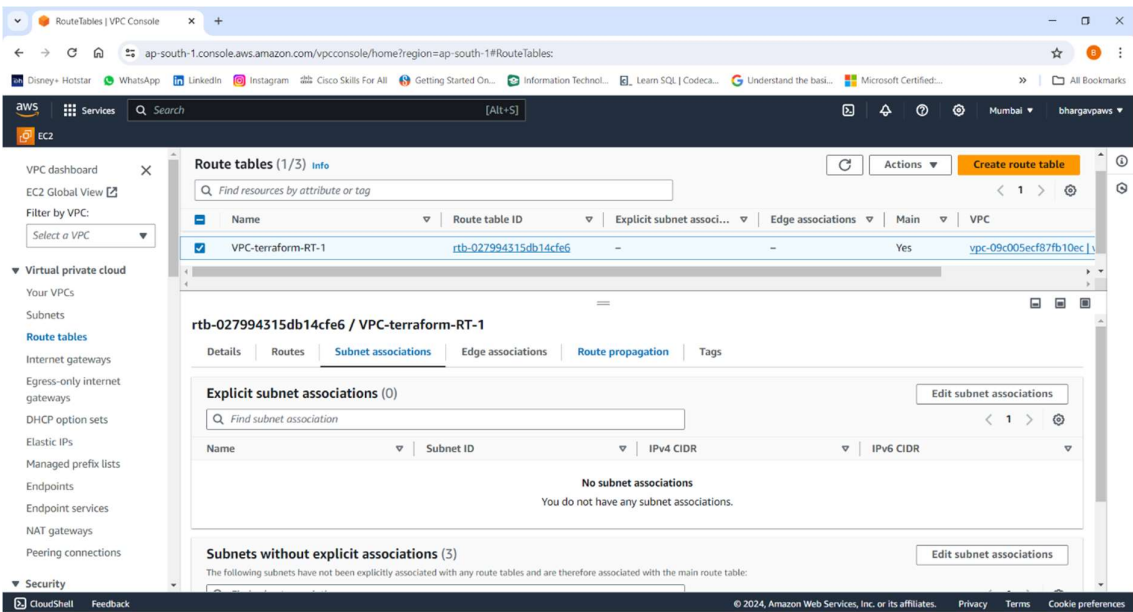
Name	Subnet ID	State	VPC	IPv4 C...	IPv6 ...	Avail...	Avail...
Public Subnet 1	subnet-00c25137151b428d8	Available	vpc-09c005ecf87fb10ec vpc-terraform	10.0.1.0/24	-	251	ap-south-1a
Private Subnet 1	subnet-0523241a68c722597	Available	vpc-09c005ecf87fb10ec vpc-terraform	10.0.4.0/24	-	251	ap-south-1a
Public Subnet 3	subnet-0e3ecb44e2a661edd	Available	vpc-09c005ecf87fb10ec vpc-terraform	10.0.3.0/24	-	251	ap-south-1c
-	subnet-0c08eef7df9e19e99	Available	vpc-02c974a3ee6906814	172.31.0...	-	4091	ap-south-1b
Private Subnet 3	subnet-0daeb97fc4b6076c0	Available	vpc-09c005ecf87fb10ec vpc-terraform	10.0.6.0/24	-	251	ap-south-1c
-	subnet-0a3001ae41464c5b6	Available	vpc-02c974a3ee6906814	172.31.1...	-	4091	ap-south-1c
Private Subnet 2	subnet-038de12d53950b33	Available	vpc-09c005ecf87fb10ec vpc-terraform	10.0.5.0/24	-	251	ap-south-1b
Public Subnet 2	subnet-0aa6c66204ffa6ada	Available	vpc-09c005ecf87fb10ec vpc-terraform	10.0.2.0/24	-	251	ap-south-1b

Subnets: subnet-00c25137151b428d8, subnet-0523241a68c722597, subnet-0e3ecb44e2a661edd, subnet-0daeb97fc4b6076c0, subnet-038de12d53950b33, subnet-0aa6c66204ffa6ada

Internet gateway:



Route table(Main Route table): The subnets are without explicit association.



Route table-2(subnets without explicit association)

RouteTables | VPC Console

ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#RouteTables

Services

Search

[Alt+S]

Mumbai

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VPC dashboard

EC2 Global View

Filter by VPC:

Select a VPC

Virtual private cloud

Your VPCs

Subnets

Route tables

Internet gateways

Egress-only internet gateways

DHCP option sets

Elastic IPs

Managed prefix lists

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

CloudShell

Feedback

Route tables (1/3) info

Find resources by attribute or tag

< 1 >

Actions

Create route table

Route table ID

Explicit subnet associ...

Edge associations

Main

VPC

VPC-terraform-RT-2

rtb-05172dd1eb1b9c340

3 subnets

No

vpc-09c005ecf87fb10ec

rtb-05172dd1eb1b9c340 / VPC-terraform-RT-2

Details

Routes

Subnet associations

Edge associations

Route propagation

Tags

Explicit subnet associations (3)

Find subnet association

Edit subnet associations

Name

Subnet ID

IPv4 CIDR

IPv6 CIDR

Public Subnet 1

subnet-00c25137151b428d8

10.0.1.0/24

-

Public Subnet 3

subnet-0e3ecb44e2a661edd

10.0.3.0/24

-

Public Subnet 2

subnet-0aa6c66204ffa6ada

10.0.2.0/24

-

Subnets without explicit associations (3)

The following subnets have not been explicitly associated with any route tables and are therefore associated with the main route table:

Edit subnet associations

Name

Subnet ID

IPv4 CIDR

IPv6 CIDR

Private Subnet 1

subnet-0523241a68c722597

10.0.4.0/24

-

Private Subnet 3

subnet-0daeb97fc4b6076c0

10.0.6.0/24

-

Private Subnet 2

subnet-038de12d5393e0b33

10.0.5.0/24

-

RouteTables | VPC Console

ap-south-1.console.aws.amazon.com/vpcconsole/home?region=ap-south-1#RouteTables

Services

Search

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Route tables (1/3) info

Find resources by attribute or tag

< 1 >

Actions

Create route table

Route table ID

Explicit subnet associ...

Edge associations

Main

VPC

VPC-terraform-RT-2

rtb-05172dd1eb1b9c340

3 subnets

No

vpc-09c005ecf87fb10ec

rtb-05172dd1eb1b9c340 / VPC-terraform-RT-2

Details

Routes

Subnet associations

Edge associations

Route propagation

Tags

Explicit subnet associations (3)

Find subnet association

Edit subnet associations

Name

Subnet ID

IPv4 CIDR

IPv6 CIDR

Public Subnet 1

subnet-00c25137151b428d8

10.0.1.0/24

-

Public Subnet 3

subnet-0e3ecb44e2a661edd

10.0.3.0/24

-

Public Subnet 2

subnet-0aa6c66204ffa6ada

10.0.2.0/24

-

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Name

Subnet ID

IPv4 CIDR

IPv6 CIDR

Private Subnet 1

subnet-0523241a68c722597

10.0.4.0/24

-

Private Subnet 3

subnet-0daeb97fc4b6076c0

10.0.6.0/24

-

Private Subnet 2

subnet-038de12d5393e0b33

10.0.5.0/24

-