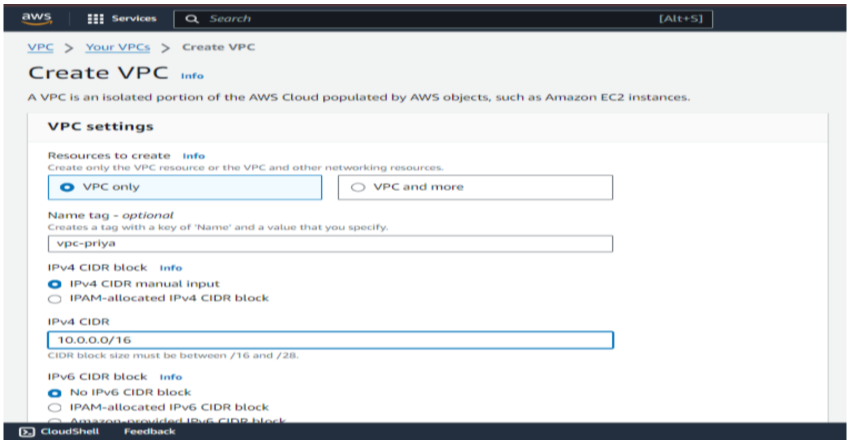
Virtual Private Cloud

VPC ***SUBNET*** *INTERNET GATEWAY* ***SECURITY GROUPS*** *EC2* ***ELASTIC IP*** *NAT GATEWAY*

Step 1 Create a own VPC



VPC > Your VPCs > Create VPC

Create VPC Info

A VPC is an isolated portion of the AWS Cloud populated by AWS objects, such as Amazon EC2 instances.

VPC settings

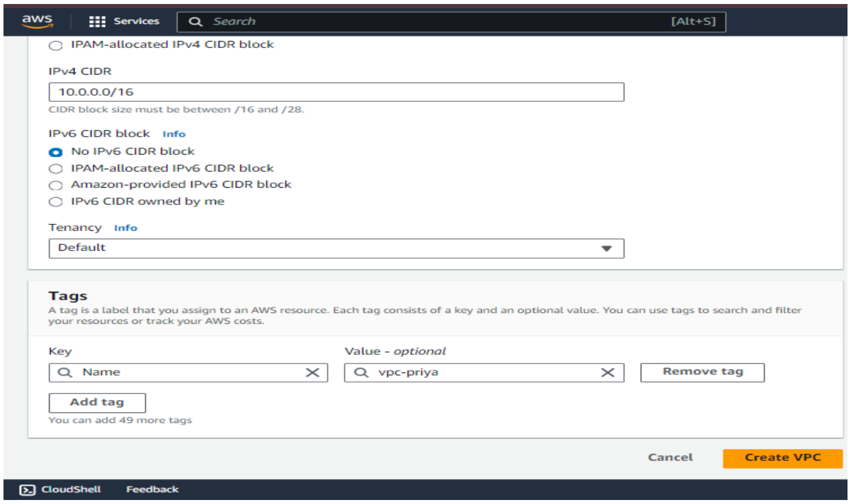
Resources to create Info
Create only the VPC resource or the VPC and other networking resources.
● VPC only ○ VPC and more

Name tag - *optional*
Creates a tag with a key of 'Name' and a value that you specify.
vpc-priya

IPv4 CIDR block Info
● IPv4 CIDR manual input
○ IPAM-allocated IPv4 CIDR block

IPv4 CIDR
10.0.0.0/16
CIDR block size must be between /16 and /28.

IPv6 CIDR block Info
● No IPv6 CIDR block
○ IPAM-allocated IPv6 CIDR block
○ Amazon-provided IPv6 CIDR block



○ IPAM-allocated IPv4 CIDR block

IPv4 CIDR
10.0.0.0/16
CIDR block size must be between /16 and /28.

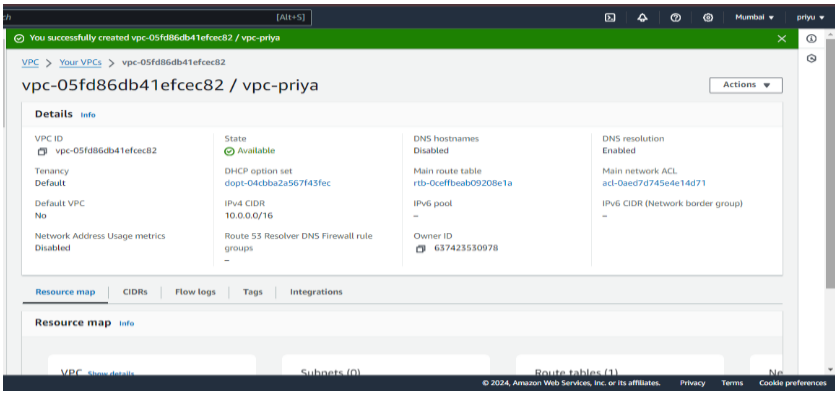
IPv6 CIDR block Info
● No IPv6 CIDR block
○ IPAM-allocated IPv6 CIDR block
○ Amazon-provided IPv6 CIDR block
○ IPv6 CIDR owned by me

Tenancy Info
Default

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key: Name
Value - *optional*: vpc-priya

You can add 49 more tags



You successfully created vpc-05fd86db41efcec82 / vpc-priya

VPC > Your VPCs > vpc-05fd86db41efcec82

vpc-05fd86db41efcec82 / vpc-priya

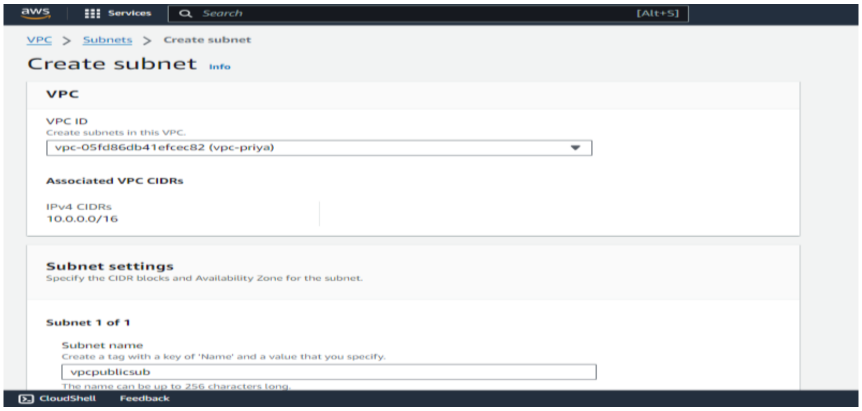
Details Info

VPC ID: vpc-05fd86db41efcec82
State: Available
DNS hostnames: Disabled
DNS resolution: Enabled
Tenancy: Default
DHCP option set: dopt-04cbba2a567f43fec
Main route table: rtb-0ceffbeab09208e1a
Main network ACL: acl-0aed7d745e4e14d71
Default VPC: No
IPv4 CIDR: 10.0.0.0/16
IPv6 pool: –
IPv6 CIDR (Network border group): –
Network Address Usage metrics: Disabled
Route 53 Resolver DNS Firewall rule groups: –
Owner ID: 637423530978

Resource map Info

Step 2 Create a public and private subnet for different Available AZs by assigning different CIDR blocks

- Public subnet



Create subnet Info

VPC

VPC ID
Create subnets in this VPC.
vpc-05fd86db41efcec82 (vpc-priya)

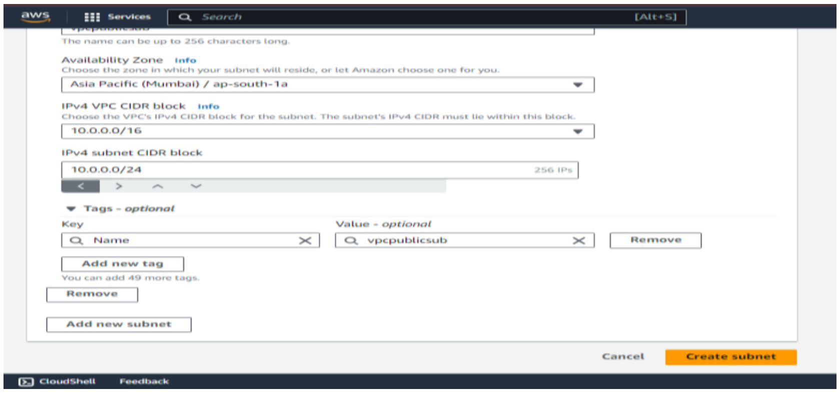
Associated VPC CIDRs

IPv4 CIDRs
10.0.0.0/16

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
vpcpublicsub
The name can be up to 256 characters long.



The name can be up to 256 characters long.

Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
Asia Pacific (Mumbai) / ap-south-1a

IPv4 VPC CIDR block Info
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.
10.0.0.0/16

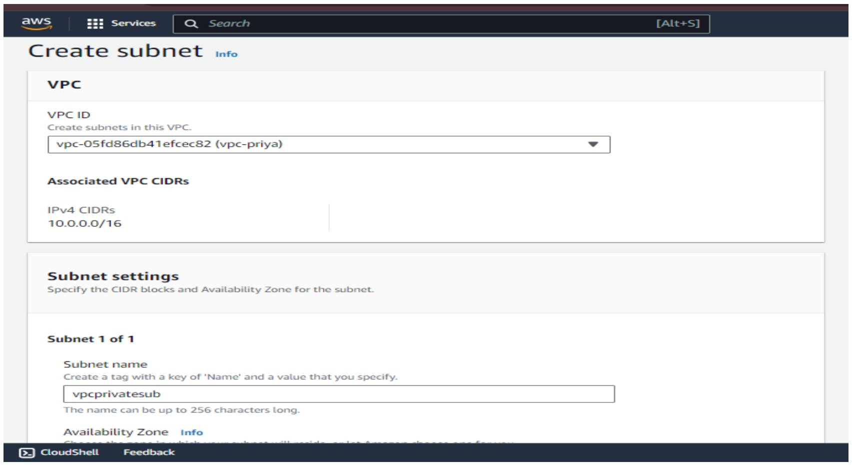
IPv4 subnet CIDR block
10.0.0.0/24 256 IPs

Tags - *optional*

Key: Name
Value - *optional*: vpcpublicsub

You can add 49 more tags.

- Private subnet



Create subnet Info

VPC

VPC ID
Create subnets in this VPC.
vpc-05fd86db41efcec82 (vpc-priya)

Associated VPC CIDRs

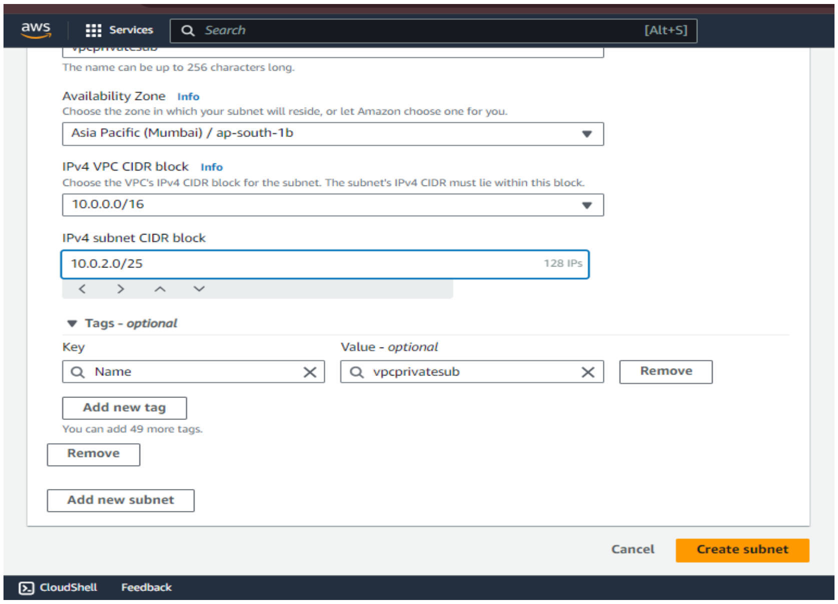
IPv4 CIDRs
10.0.0.0/16

Subnet settings
Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name
Create a tag with a key of 'Name' and a value that you specify.
vpcprivatesub
The name can be up to 256 characters long.

Availability Zone Info



The name can be up to 256 characters long.

Availability Zone Info
Choose the zone in which your subnet will reside, or let Amazon choose one for you.
Asia Pacific (Mumbai) / ap-south-1b

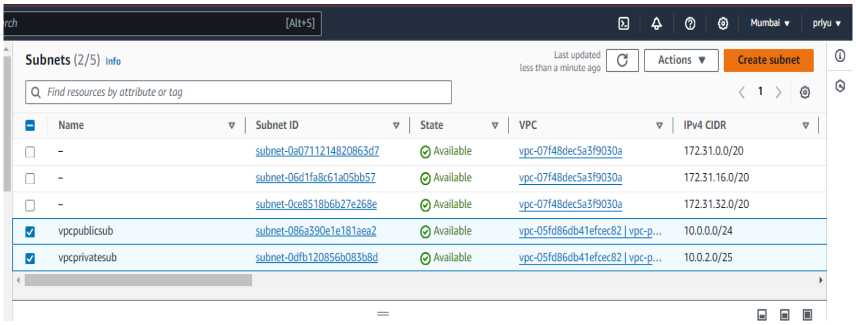
IPv4 VPC CIDR block Info
Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.
10.0.0.0/16

IPv4 subnet CIDR block
10.0.2.0/25 128 IPs

Tags - *optional*

Key	Value - *optional*
Name	vpcprivatesub

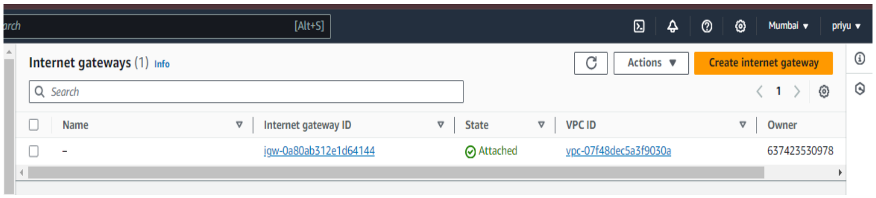
Add new tag
You can add 49 more tags.



Subnets (2/5) Info

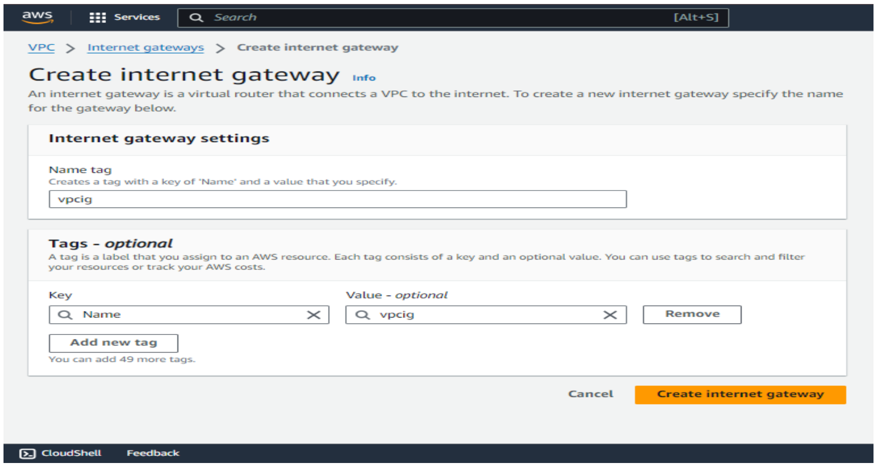
	Name	Subnet ID	State	VPC	IPv4 CIDR
□	-	subnet-0a0711214820863d7	Available	vpc-07f48dec5a3f9030a	172.31.0.0/20
□	-	subnet-06d1fa8c61a05bb57	Available	vpc-07f48dec5a3f9030a	172.31.16.0/20
□	-	subnet-0ce8518b6b27e268e	Available	vpc-07f48dec5a3f9030a	172.31.32.0/20
☑	vpcpublicsub	subnet-086a390e1e181aea2	Available	vpc-05fd86db41efcec82 | vpc-p...	10.0.0.0/24
☑	vpcprivatesub	subnet-0dfb120856b083b8d	Available	vpc-05fd86db41efcec82 | vpc-p...	10.0.2.0/25

Step 3 Create IGW attach to VPC



Internet gateways (1) Info

	Name	Internet gateway ID	State	VPC ID	Owner
□	-	igw-0a80ab312e1d64144	Attached	vpc-07f48dec5a3f9030a	637423530978



Create internet gateway Info

An internet gateway is a virtual router that connects a VPC to the internet. To create a new internet gateway specify the name for the gateway below.

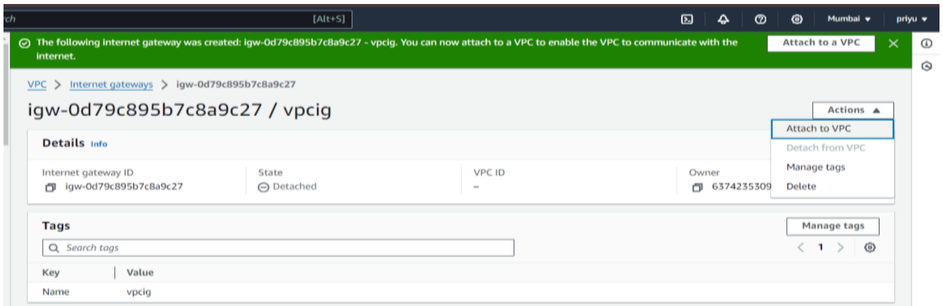
Internet gateway settings

Name tag
Creates a tag with a key of 'Name' and a value that you specify.
vpcig

Tags - *optional*
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - *optional*
Name	vpcig

You can add 49 more tags.



The following internet gateway was created: igw-0d79c895b7c8a9c27 - vpcig. You can now attach to a VPC to enable the VPC to communicate with the internet.

VPC > Internet gateways > igw-0d79c895b7c8a9c27

igw-0d79c895b7c8a9c27 / vpcig

Details

Internet gateway ID: igw-0d79c895b7c8a9c27

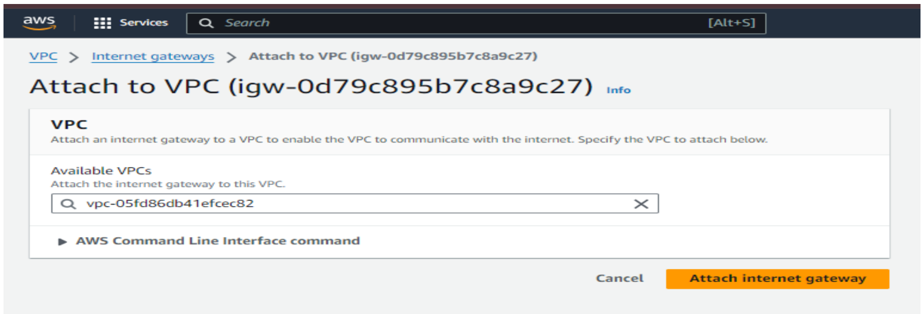
State: Detached

VPC ID: –

Owner: 6374235309

Tags

Key	Value
Name	vpcig



VPC > Internet gateways > Attach to VPC (igw-0d79c895b7c8a9c27)

Attach to VPC (igw-0d79c895b7c8a9c27)

VPC

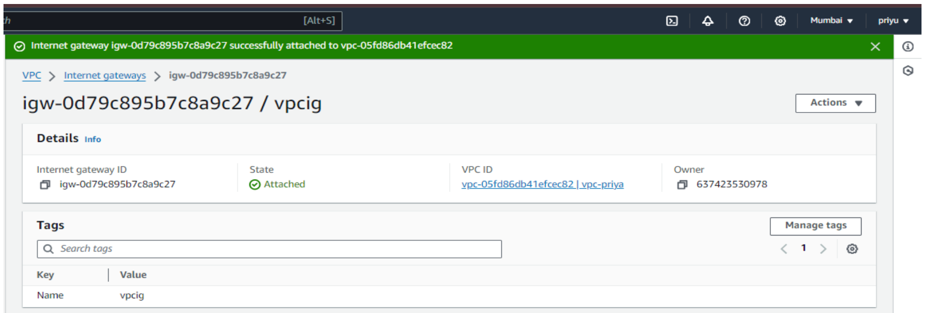
Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify the VPC to attach below.

Available VPCs

Attach the internet gateway to this VPC.

vpc-05fd86db41efcec82

▶ AWS Command Line Interface command



Internet gateway igw-0d79c895b7c8a9c27 successfully attached to vpc-05fd86db41efcec82

VPC > Internet gateways > igw-0d79c895b7c8a9c27

igw-0d79c895b7c8a9c27 / vpcig

Details

Internet gateway ID: igw-0d79c895b7c8a9c27

State: Attached

VPC ID: vpc-05fd86db41efcec82 | vpc-priya

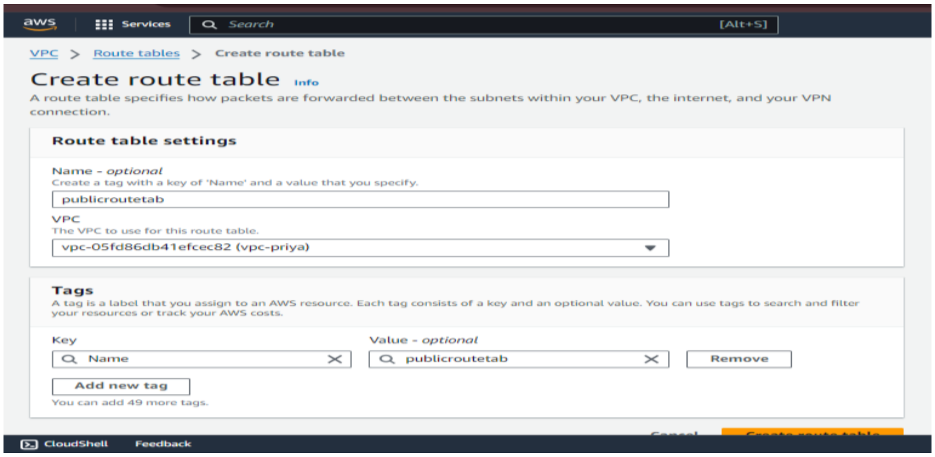
Owner: 637423530978

Tags

Key	Value
Name	vpcig

Step 4 Create Routing table (RT) one as public & one as Private by associating the appropriate subnets to it.

- Public route table



VPC > Route tables > Create route table

Create route table

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - *optional*

Create a tag with a key of 'Name' and a value that you specify.

publicroutetab

VPC

The VPC to use for this route table.

vpc-05fd86db41efcec82 (vpc-priya)

Tags

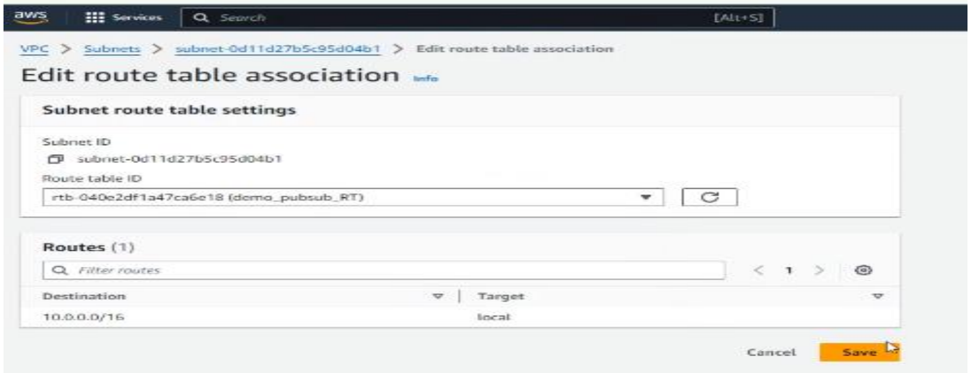
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key: Name

Value - *optional*: publicroutetab

You can add 49 more tags.

Actions-> Edit routes table associations



VPC > Subnets > subnet-0d11d27b5c95d04b1 > Edit route table association

Edit route table association Info

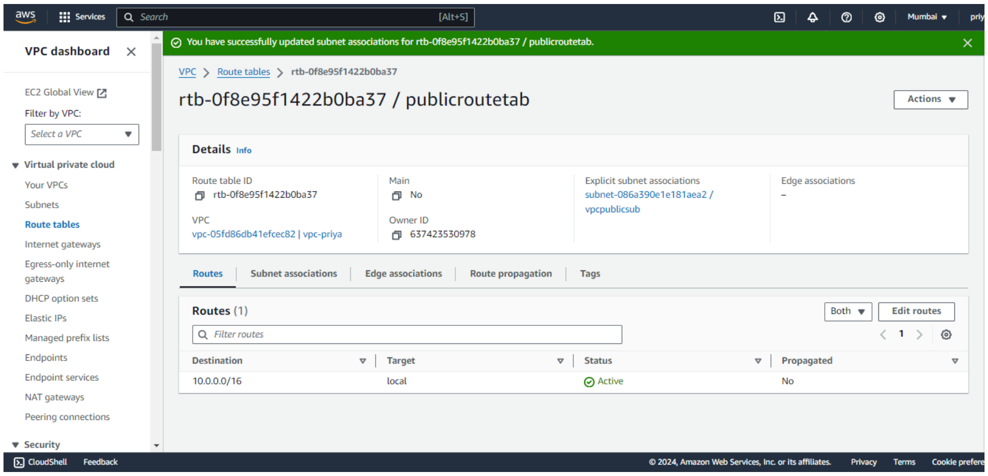
Subnet route table settings

Subnet ID
subnet-0d11d27b5c95d04b1

Route table ID
rtb-040e2df1a47ca6e18 (demo_pubsub_RT)

Routes (1)

Destination	Target
10.0.0.0/16	local



You have successfully updated subnet associations for rtb-0f8e95f1422b0ba37 / publicroutetab.

VPC > Route tables > rtb-0f8e95f1422b0ba37

rtb-0f8e95f1422b0ba37 / publicroutetab

Details Info

Route table ID: rtb-0f8e95f1422b0ba37

Main: No

Explicit subnet associations: subnet-086a390e1e181aea2 / vpcpublicsub

Edge associations: –

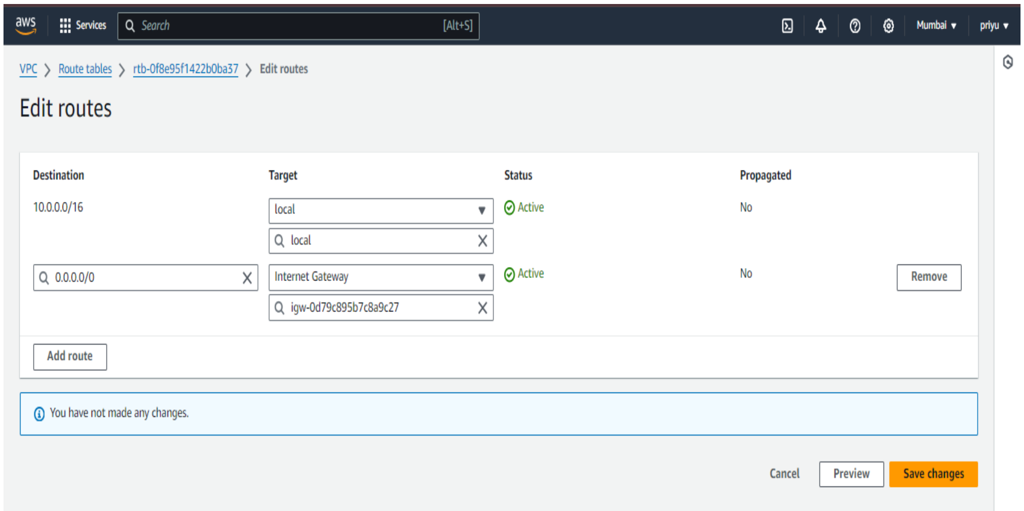
VPC: vpc-05fd86db41efcec82 | vpc-priya

Owner ID: 637423530978

Routes (1)

Destination	Target	Status	Propagated
10.0.0.0/16	local	Active	No

Actions-> Edit routes add internet gateway in public route table



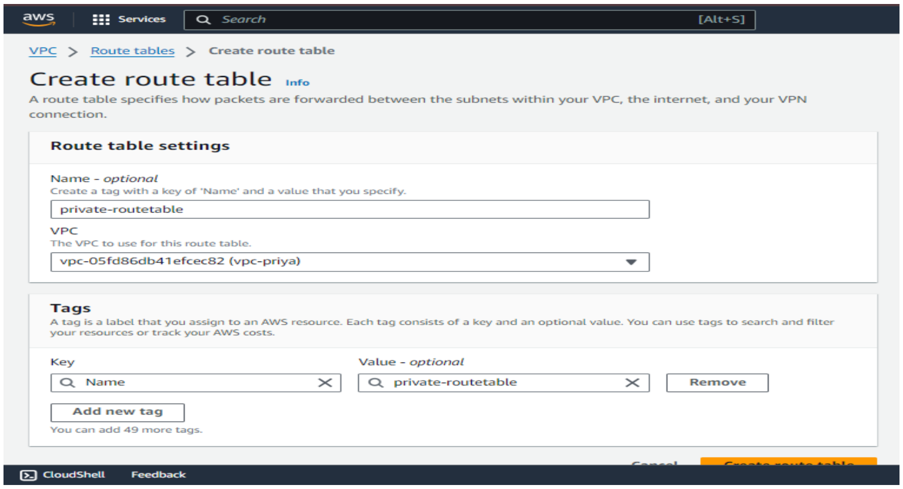
VPC > Route tables > rtb-0f8e95f1422b0ba37 > Edit routes

Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local local	Active	No
0.0.0.0/0	Internet Gateway igw-0d79c895b7c8a9c27	Active	No

You have not made any changes.

- Private route table



VPC > Route tables > Create route table

Create route table Info

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.
private-routetable

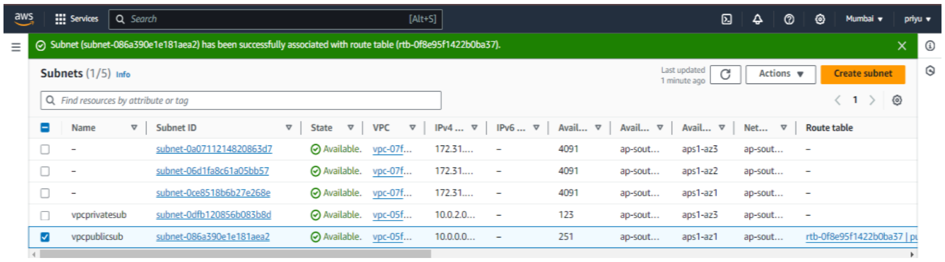
VPC
The VPC to use for this route table.
vpc-05fd86db41efcec82 (vpc-priya)

Tags
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key	Value - *optional*	
Name	private-routetable	Remove

Add new tag
You can add 49 more tags.

5. Edit the public route table's route alone and map the IGW, not the private and leave it as it is.



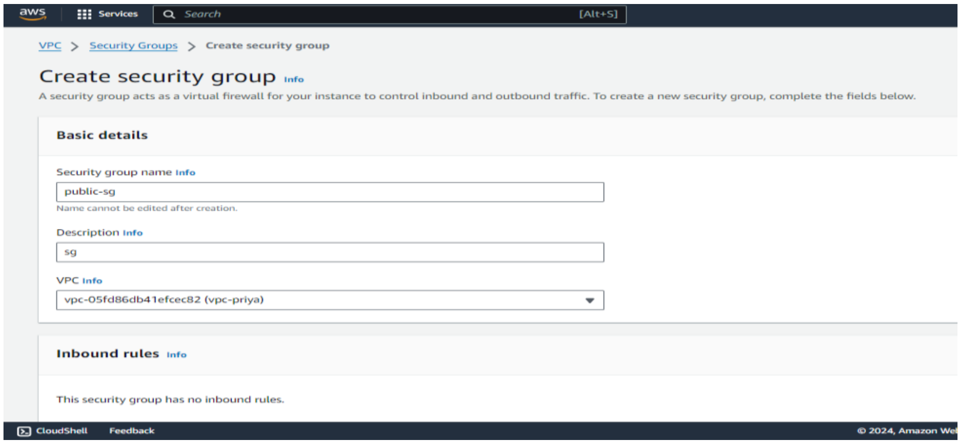
Subnet (subnet-086a390e1e181aea2) has been successfully associated with route table (rtb-0f8e95f1422b0ba37).

Subnets (1/5) Info

	Name	Subnet ID	State	VPC	IPv4 ...	IPv6 ...	Avail...	Avail...	Avail...	Net...	Route table
☐	–	subnet-0a0711214820863d7	✓ Available.	vpc-07f...	172.31....	–	4091	ap-sout...	aps1-az3	ap-sout...	–
☐	–	subnet-06d1fa8c61a05bb57	✓ Available.	vpc-07f...	172.31....	–	4091	ap-sout...	aps1-az2	ap-sout...	–
☐	–	subnet-0ce8518b6b27e268e	✓ Available.	vpc-07f...	172.31....	–	4091	ap-sout...	aps1-az1	ap-sout...	–
☐	vpcprivatesub	subnet-0dfb120856b083b8d	✓ Available.	vpc-05f...	10.0.2.0...	–	123	ap-sout...	aps1-az3	ap-sout...	–
☑	vpcpublicsub	subnet-086a390e1e181aea2	✓ Available.	vpc-05f...	10.0.0.0...	–	251	ap-sout...	aps1-az1	ap-sout...	rtb-0f8e95f1422b0ba37 | pu

Step 6 Create 2 security groups - one for public [Edit the inbound rules with RDP, HTTP/HTTPS, SSH and map 0.0.0.0/0 in the source] & one for Private [Edit the inbound rules and map the SG of public in the Source]

- Public Security group



VPC > Security Groups > Create security group

Create security group Info

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

Basic details

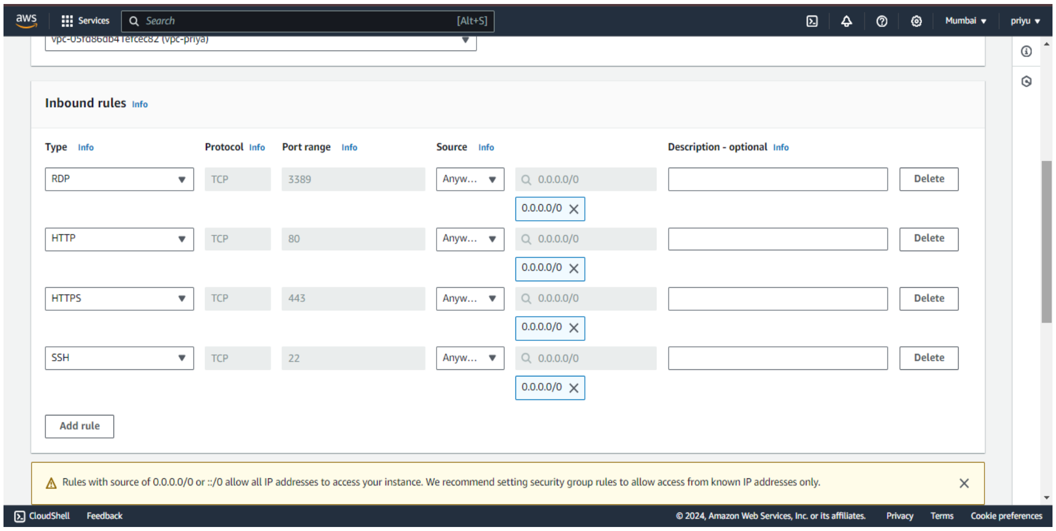
Security group name Info
public-sg
Name cannot be edited after creation.

Description Info
sg

VPC Info
vpc-05fd86db41efcec82 (vpc-priya)

Inbound rules Info

This security group has no inbound rules.

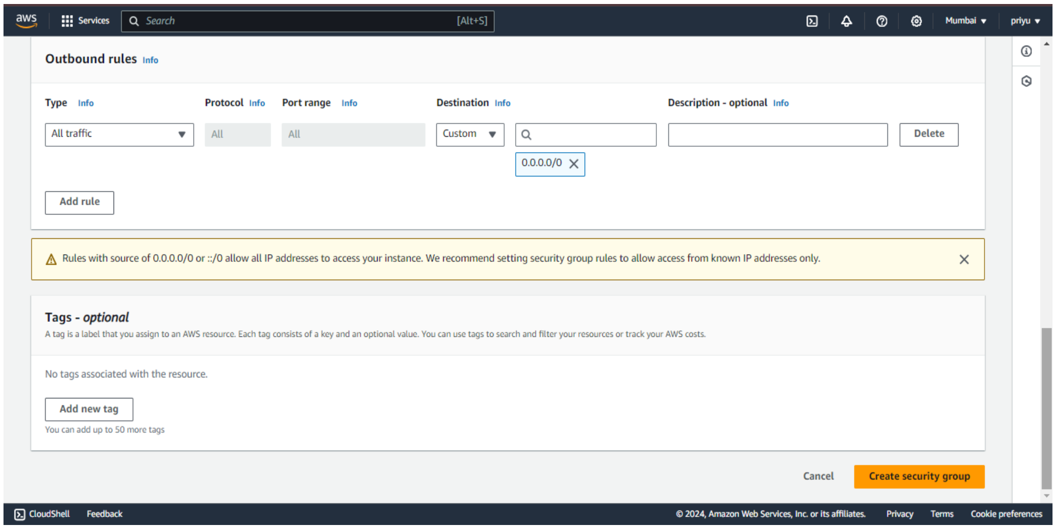


vpc-05fd86db41efcec82 (vpc-priya)

Inbound rules Info

Type	Protocol	Port range	Source		Description - optional
RDP	TCP	3389	Anyw...	0.0.0.0/0	
HTTP	TCP	80	Anyw...	0.0.0.0/0	
HTTPS	TCP	443	Anyw...	0.0.0.0/0	
SSH	TCP	22	Anyw...	0.0.0.0/0	

⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.



Outbound rules Info

Type	Protocol	Port range	Destination		Description - optional
All traffic	All	All	Custom	0.0.0.0/0	

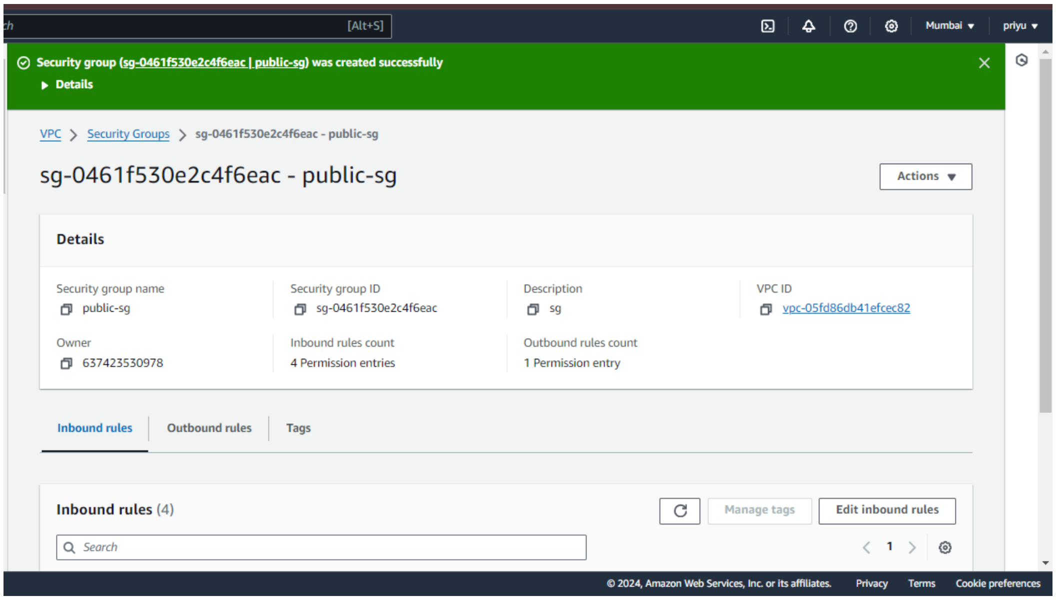
⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Tags - *optional*

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

No tags associated with the resource.

You can add up to 50 more tags



Security group (sg-0461f530e2c4f6eac | public-sg) was created successfully

VPC > Security Groups > sg-0461f530e2c4f6eac - public-sg

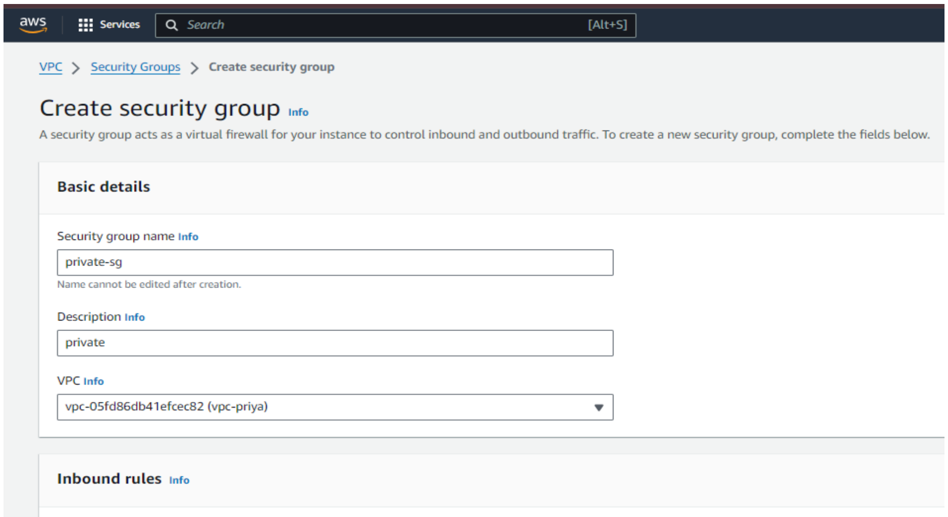
sg-0461f530e2c4f6eac - public-sg

Details

Security group name public-sg	Security group ID sg-0461f530e2c4f6eac	Description sg	VPC ID vpc-05fd86db41efcec82
Owner 637423530978	Inbound rules count 4 Permission entries	Outbound rules count 1 Permission entry	

Inbound rules (4)

- Private security group



VPC > Security Groups > Create security group

Create security group Info

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new security group, complete the fields below.

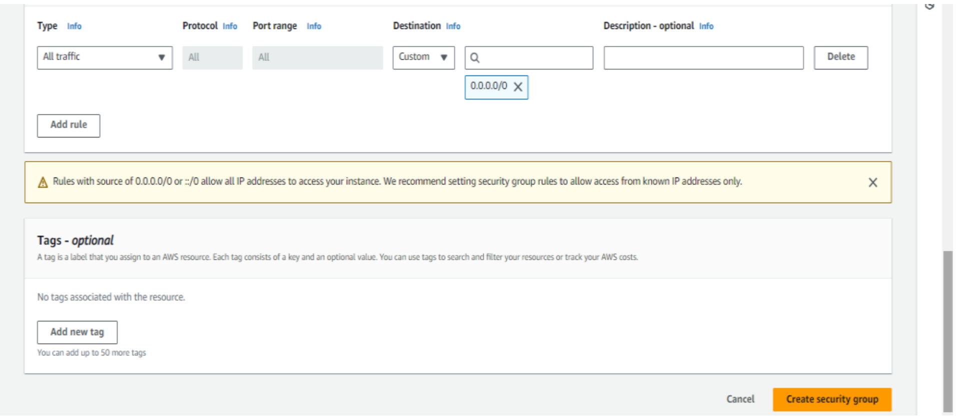
Basic details

Security group name Info
private-sg
Name cannot be edited after creation.

Description Info
private

VPC Info
vpc-05fd86db41efcec82 (vpc-priya)

Inbound rules Info



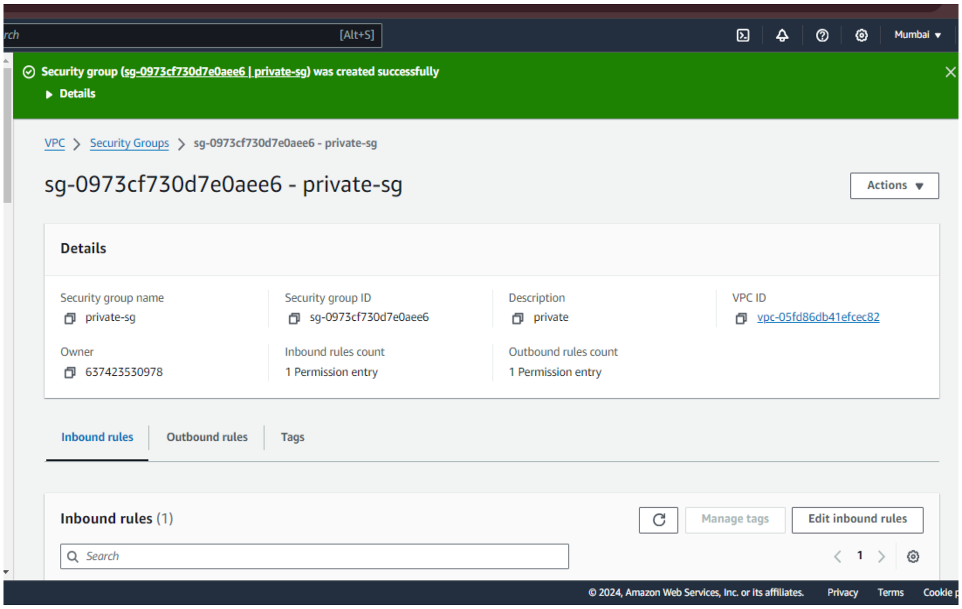
Type Info	Protocol Info	Port range Info	Destination Info		Description - optional Info	
All traffic	All	All	Custom	0.0.0.0/0		Delete

Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Tags - *optional*
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

No tags associated with the resource.

You can add up to 50 more tags



Security group (sg-0973cf730d7e0aee6 | private-sg) was created successfully
Details

VPC > Security Groups > sg-0973cf730d7e0aee6 - private-sg

sg-0973cf730d7e0aee6 - private-sg

Details

Security group name	Security group ID	Description	VPC ID
private-sg	sg-0973cf730d7e0aee6	private	vpc-05fd86db41efcec82
Owner	**Inbound rules count**	**Outbound rules count**	
637423530978	1 Permission entry	1 Permission entry	

Inbound rules (1)

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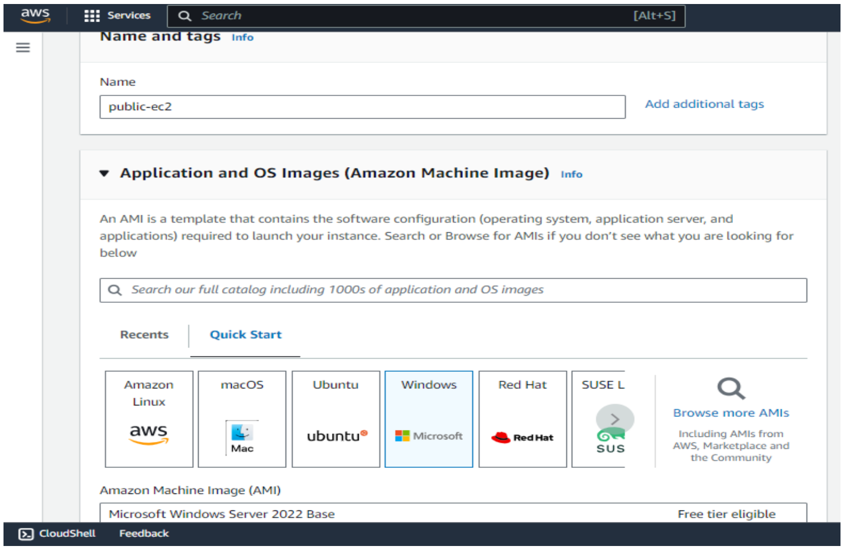
Step 7 Create 2 EC2 one in public and one in Private subnets with proper security groups.

- Public EC2



Name and tags Info

Name

public-ec2

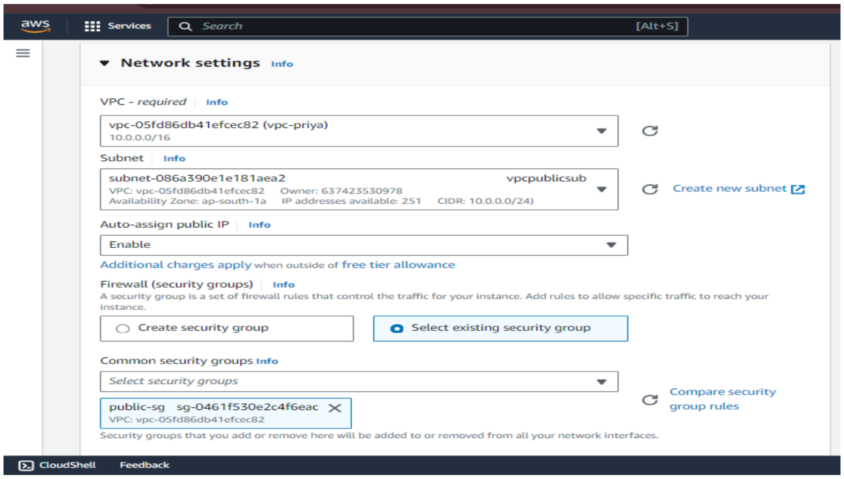
Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images
Recents
Quick Start
Amazon Linux
aws
macOS
Mac
Ubuntu
ubuntu
Windows
Microsoft
Red Hat
Red Hat
SUSE L
SUS
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Microsoft Windows Server 2022 Base — Free tier eligible



Network settings Info

VPC - *required* Info

vpc-05fd86db41efcec82 (vpc-priya)
10.0.0.0/16

Subnet Info

subnet-086a390e1e181aea2 vpcpublicsub
VPC: vpc-05fd86db41efcec82 Owner: 637423530978
Availability Zone: ap-south-1a IP addresses available: 251 CIDR: 10.0.0.0/24)

Auto-assign public IP Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups) Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

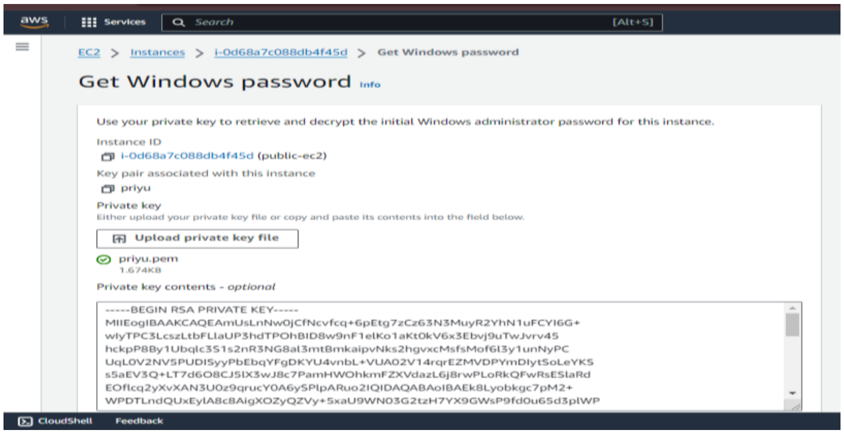
○ Create security group ● Select existing security group

Common security groups Info

Select security groups

public-sg sg-0461f530e2c4f6eac
VPC: vpc-05fd86db41efcec82

Security groups that you add or remove here will be added to or removed from all your network interfaces.



EC2 > Instances > i-0d68a7c088db4f45d > Get Windows password

Get Windows password Info

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID

i-0d68a7c088db4f45d (public-ec2)

Key pair associated with this instance

priyu

Private key

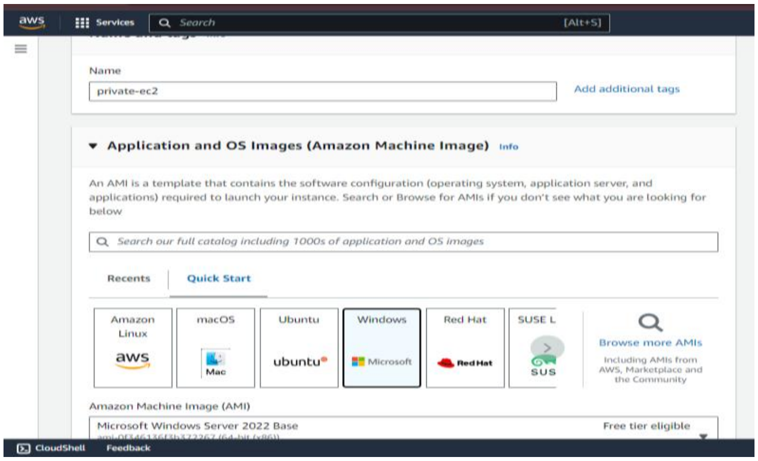
Either upload your private key file or copy and paste its contents into the field below.

priyu.pem
1.674KB

Private key contents - *optional*

```
-----BEGIN RSA PRIVATE KEY-----
MIIEogIBAAKCAQEAmUsLnNw0jCfNcvfcq+6pEtg7zCz63N3MuyR2YhN1uFCYI6G+
wlyTPC3LcszLtbFLlaUP3hdTPOhBID8w9nF1elKo1aKt0kV6x3Ebvj9uTwJvrv45
hckpP8By1Ubqlc3S1s2nR3NG8al3mtBmkaipvNks2hgvxcMsfsMof6l3y1unNyPC
UqL0V2NV5PUDISyyPbEbqYFgDKYU4vnbL+VUA02V14rqrEZMVDPYmDlytSoLeYKS
s5aEV3Q+LT7d6O8CJ5lX3wJ8c7PamHWOhkmFZXVdazL6j8rwPLoRkQFwRsESlaRd
EOflcq2yXvXAN3U0z9qrucY0A6ySPlpARuo2IQIDAQABAoIBAEk8Lyobkgc7pM2+
WPDTLndQUxEylA8c8AigXOZyQZVy+5xaU9WN03G2tzH7YX9GWsP9fd0u65d3plWP
```

- Private EC2



Name

private-ec2

Add additional tags

▼ Application and OS Images (Amazon Machine Image) Info

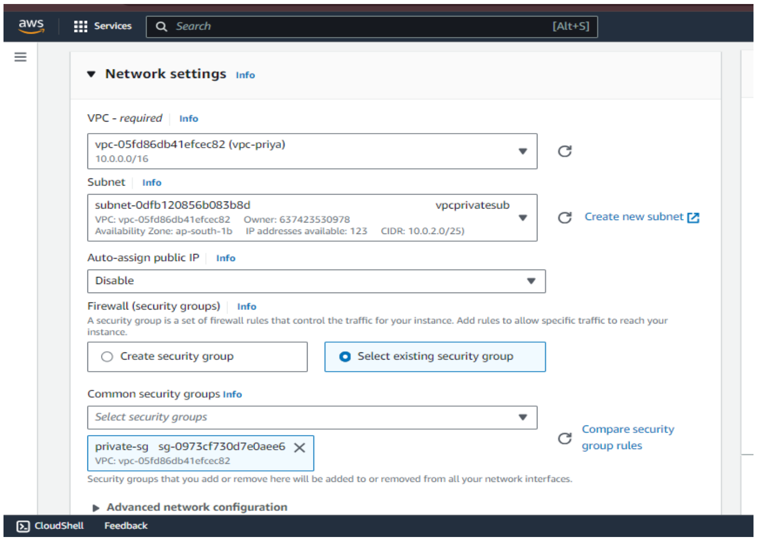
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Recents | Quick Start

Amazon Machine Image (AMI)

Microsoft Windows Server 2022 Base   Free tier eligible



▼ Network settings Info

VPC - *required* | Info

vpc-05fd86db41efcec82 (vpc-priya)
10.0.0.0/16

Subnet | Info

subnet-0dfb120856b083b8d   vpcprivatesub
VPC: vpc-05fd86db41efcec82   Owner: 637423530978
Availability Zone: ap-south-1b   IP addresses available: 123   CIDR: 10.0.2.0/25)

Create new subnet

Auto-assign public IP | Info

Disable

Firewall (security groups) | Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

○ Create security group   ● Select existing security group

Common security groups Info

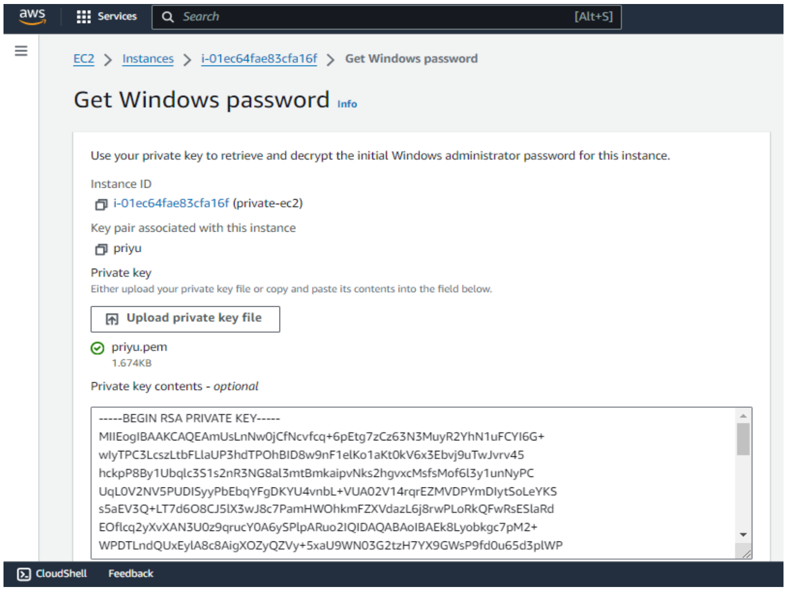
Select security groups

private-sg   sg-0973cf730d7e0aee6 ✕
VPC: vpc-05fd86db41efcec82

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

▶ Advanced network configuration



EC2 > Instances > i-01ec64fae83cfa16f > Get Windows password

Get Windows password Info

Use your private key to retrieve and decrypt the initial Windows administrator password for this instance.

Instance ID

i-01ec64fae83cfa16f (private-ec2)

Key pair associated with this instance

priyu

Private key

Either upload your private key file or copy and paste its contents into the field below.

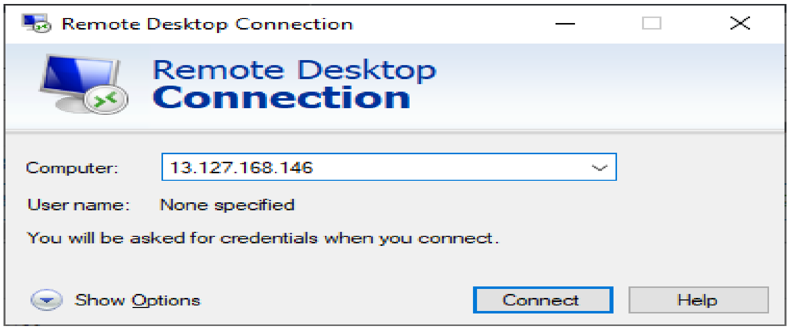
Upload private key file

✓ priyu.pem
1.674KB

Private key contents - *optional*

```
-----BEGIN RSA PRIVATE KEY-----
MIIEogIBAAKCAQEAmUsLnNw0jCfNcvfcq+6pEtg7zCz63N3MuyR2YhN1uFCYI6G+
wlyTPC3LcszLtbFLlaUP3hdTPOhBID8w9nF1elKo1aKt0kV6x3Ebvj9uTwJvrv45
hckpP8By1Ubqlc3S1s2nR3NG8al3mtBmkaipvNks2hgvxcMsfsMof6l3y1unNyPC
UqL0V2NV5PUDISyyPbEbqYFgDKYU4vnbL+VUA02V14rqrEZMVDPYmDlytSoLeYKS
s5aEV3Q+LT7d6O8CJ5lX3wJ8c7PamHWOhkmFZXVdazL6j8rwPLoRkQFwRsESlaRd
EOflcq2yXvXAN3U0z9qrucY0A6ySPlpARuo2IQIDAQABAoIBAEk8Lyobkgc7pM2+
WPDTLndQUxEylA8c8AigXOZyQZVy+5xaU9WN03G2tzH7YX9GWsP9fd0u65d3plWP
```

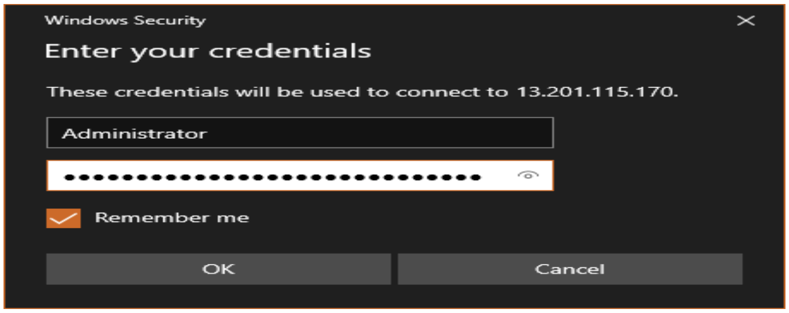
- Launching public instance


Remote Desktop Connection

Computer: 13.127.168.146

User name: None specified

You will be asked for credentials when you connect.


Windows Security

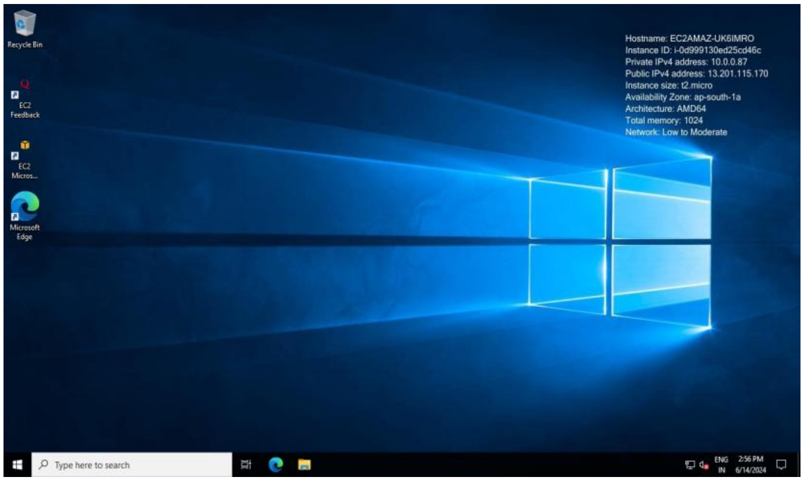
Enter your credentials

These credentials will be used to connect to 13.201.115.170.

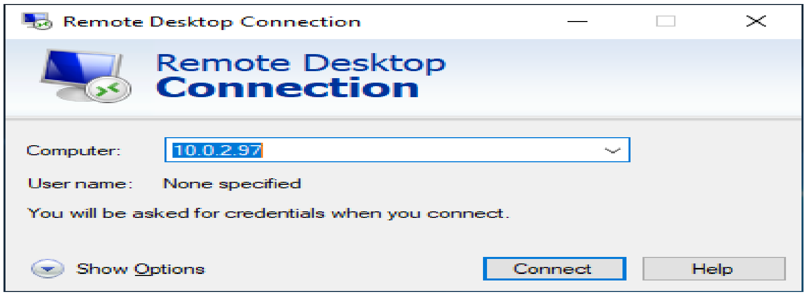
Administrator

••••••••••••••••••••••••••••••

☑ Remember me


Hostname: EC2AMAZ-UK6IMRO
Instance ID: i-0d999130ed25cd46c
Private IPv4 address: 10.0.0.87
Public IPv4 address: 13.201.115.170
Instance size: t2.micro
Availability Zone: ap-south-1a
Architecture: AMD64
Total memory: 1024
Network: Low to Moderate

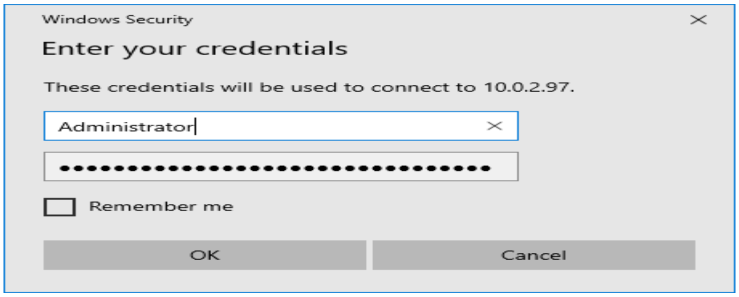
- Private EC2 instance launching inside public EC2 instance


Remote Desktop Connection

Computer: 10.0.2.97

User name: None specified

You will be asked for credentials when you connect.



Windows Security

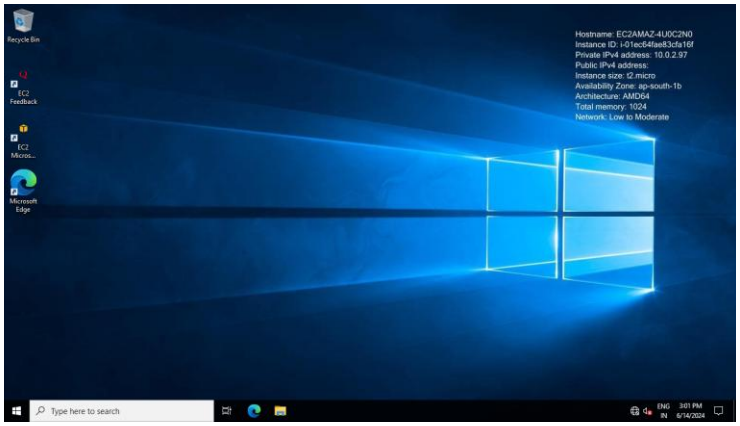
Enter your credentials

These credentials will be used to connect to 10.0.2.97.

Administrator

●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●

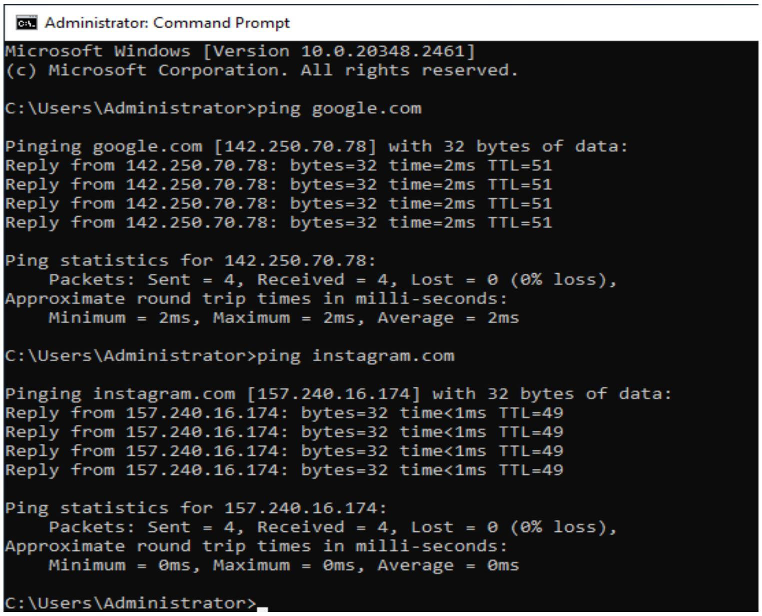
□ Remember me



Hostname: EC2AMAZ-4U0C2N0
Instance ID: i-01ec64fae83cfa16f
Private IPv4 address: 10.0.2.97
Public IPv4 address:
Instance size: t2.micro
Availability Zone: ap-south-1b
Architecture: AMD64
Total memory: 1024
Network: Low to Moderate

Step 8 Login into Public and check the internet connection.

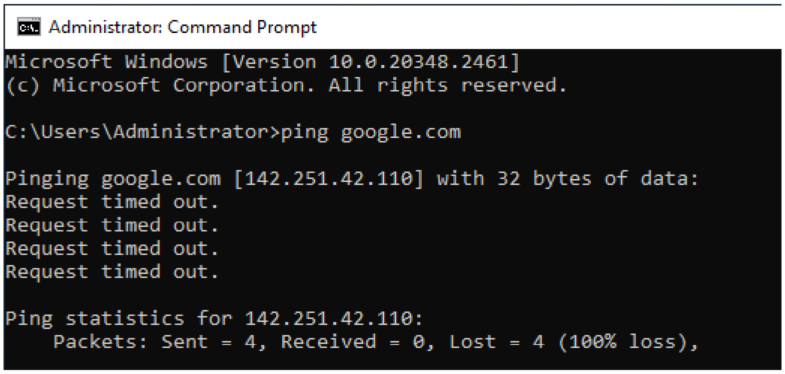
- Public EC2



Administrator: Command Prompt

```
Microsoft Windows [Version 10.0.20348.2461]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping google.com

Pinging google.com [142.250.70.78] with 32 bytes of data:
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51

Ping statistics for 142.250.70.78:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 2ms, Average = 2ms

C:\Users\Administrator>ping instagram.com

Pinging instagram.com [157.240.16.174] with 32 bytes of data:
Reply from 157.240.16.174: bytes=32 time<1ms TTL=49
Reply from 157.240.16.174: bytes=32 time<1ms TTL=49
Reply from 157.240.16.174: bytes=32 time<1ms TTL=49
Reply from 157.240.16.174: bytes=32 time<1ms TTL=49

Ping statistics for 157.240.16.174:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

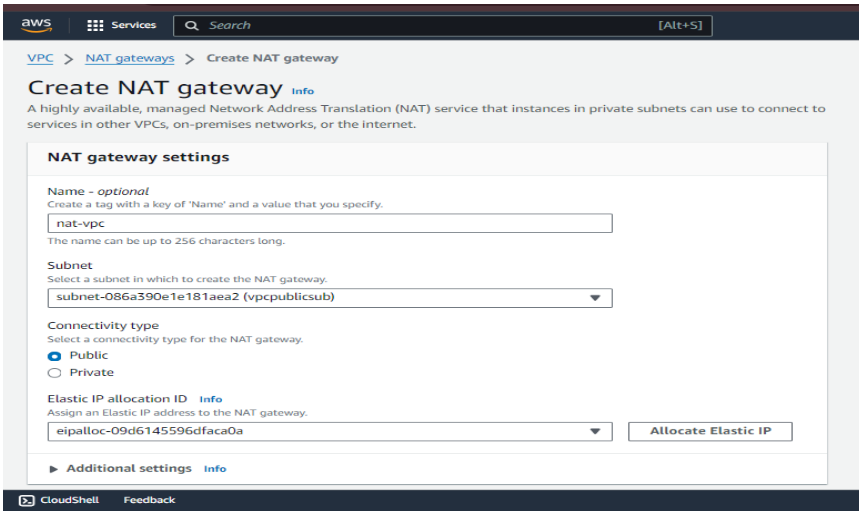
- Private EC2



Administrator: Command Prompt

```
Microsoft Windows [Version 10.0.20348.2461]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping google.com

Pinging google.com [142.251.42.110] with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 142.251.42.110:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Step 9 Create NAT Gateway with new Elastic IP for the internet connection in the public subnet. Map it to Private Route table



Create NAT gateway Info

A highly available, managed Network Address Translation (NAT) service that instances in private subnets can use to connect to services in other VPCs, on-premises networks, or the internet.

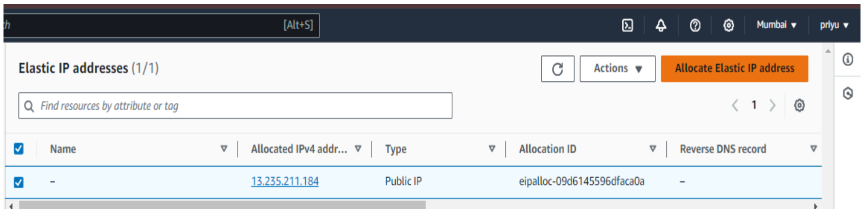
NAT gateway settings

Name - *optional*
Create a tag with a key of 'Name' and a value that you specify.
nat-vpc
The name can be up to 256 characters long.

Subnet
Select a subnet in which to create the NAT gateway.
subnet-086a390e1e181aea2 (vpcpublicsub)

Connectivity type
Select a connectivity type for the NAT gateway.
● Public
○ Private

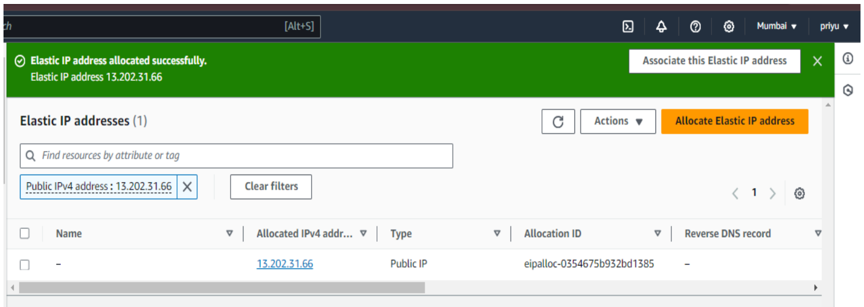
Elastic IP allocation ID Info
Assign an Elastic IP address to the NAT gateway.
eipalloc-09d6145596dfaca0a



Elastic IP addresses (1/1)

Find resources by attribute or tag

☑	Name	Allocated IPv4 addr...	Type	Allocation ID	Reverse DNS record
☑	-	13.235.211.184	Public IP	eipalloc-09d6145596dfaca0a	-



[Alt+S]
Mumbai ▾
priyu ▾
Associate this Elastic IP address
Actions ▾
Allocate Elastic IP address
Clear filters

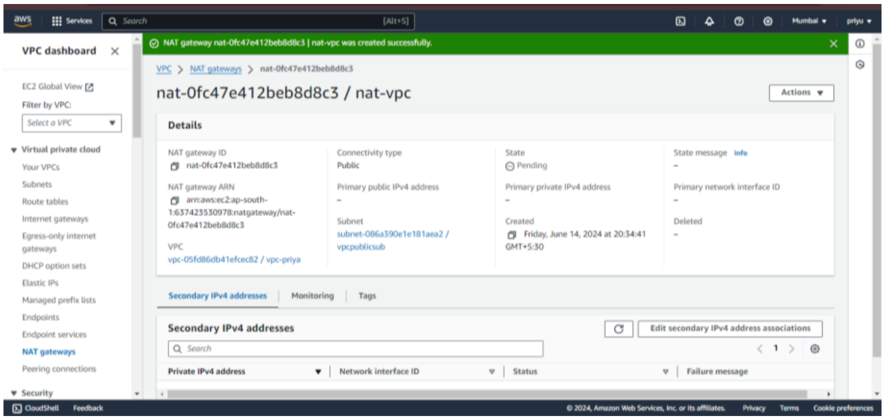
Elastic IP address allocated successfully.
Elastic IP address 13.202.31.66

Elastic IP addresses (1)

Find resources by attribute or tag

Public IPv4 address : 13.202.31.66

□	Name	Allocated IPv4 addr...	Type	Allocation ID	Reverse DNS record
□	-	13.202.31.66	Public IP	eipalloc-0354675b932bd1385	-



NAT gateway nat-0fc47e412beb8d8c3 | nat-vpc was created successfully.

VPC > NAT gateways > nat-0fc47e412beb8d8c3

nat-0fc47e412beb8d8c3 / nat-vpc

Details

NAT gateway ID: nat-0fc47e412beb8d8c3

NAT gateway ARN: arn:aws:ec2:ap-south-1:637423530978:natgateway/nat-0fc47e412beb8d8c3

VPC: vpc-05fd86db41efcec82 / vpc-priya

Connectivity type: Public

Primary public IPv4 address: –

Subnet: subnet-086a390e1e181aea2 / vpcpublicsub

State: Pending

Primary private IPv4 address: –

Created: Friday, June 14, 2024 at 20:34:41 GMT+5:30

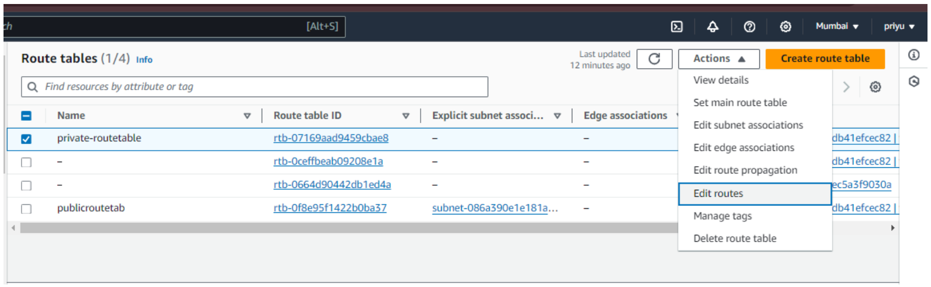
State message Info: –

Primary network interface ID: –

Deleted: –

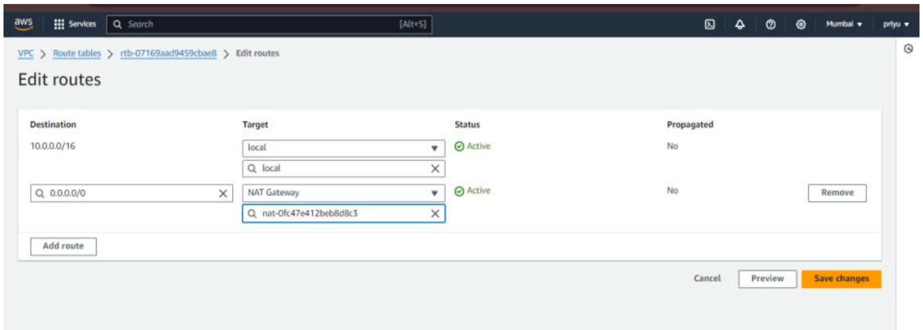
Secondary IPv4 addresses

Private IPv4 address	Network interface ID	Status	Failure message



Route tables (1/4)

	Name	Route table ID	Explicit subnet associ...	Edge associations	
☑	private-routetable	rtb-07169aad9459cbae8	–	–	db41efcec82 |
□	–	rtb-0ceffbeab09208e1a	–	–	db41efcec82 |
□	–	rtb-0664d90442db1ed4a	–	–	ec5a3f9030a
□	publicroutetab	rtb-0f8e95f1422b0ba37	subnet-086a390e1e181a...	–	db41efcec82 |

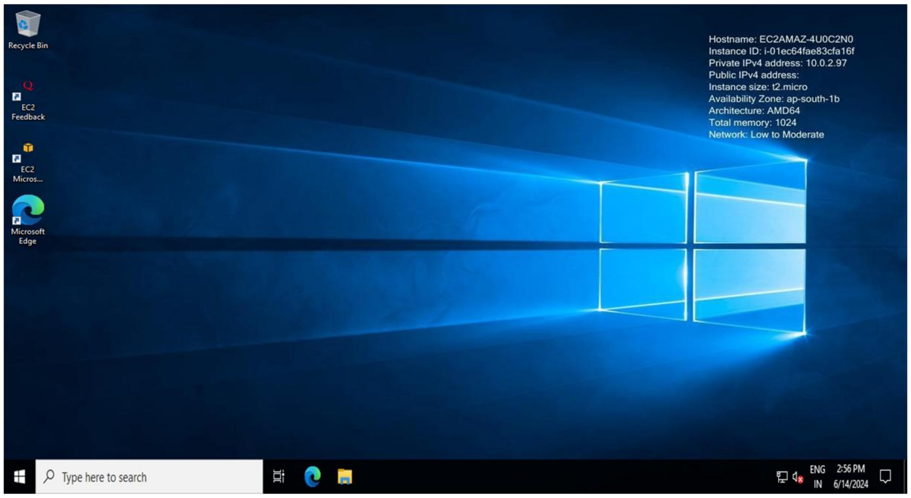


VPC > Route tables > rtb-07169aad9459cbae8 > Edit routes

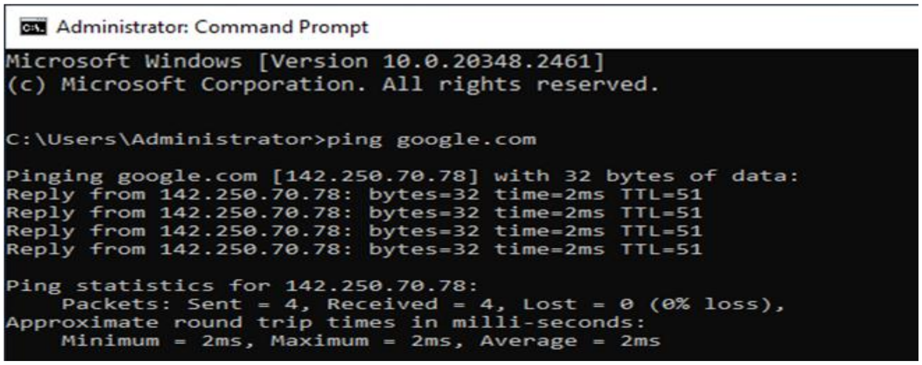
Edit routes

Destination	Target	Status	Propagated
10.0.0.0/16	local local	Active	No
0.0.0.0/0	NAT Gateway nat-0fc47e412beb8d8c3	Active	No

Step 10 Now, login into the Private EC2 and verify the connectivity and Internet facility.

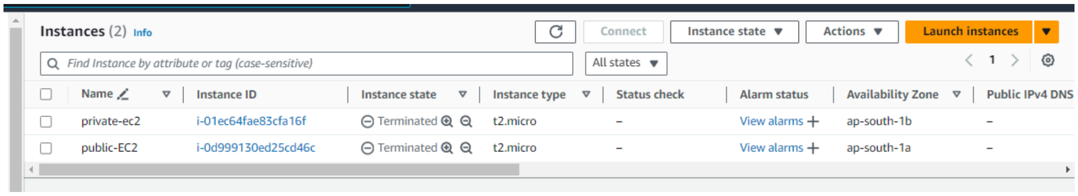


Hostname: EC2AMAZ-4U0C2N0
Instance ID: i-01ec64fae83cfa16f
Private IPv4 address: 10.0.2.97
Public IPv4 address:
Instance size: t2.micro
Availability Zone: ap-south-1b
Architecture: AMD64
Total memory: 1024
Network: Low to Moderate



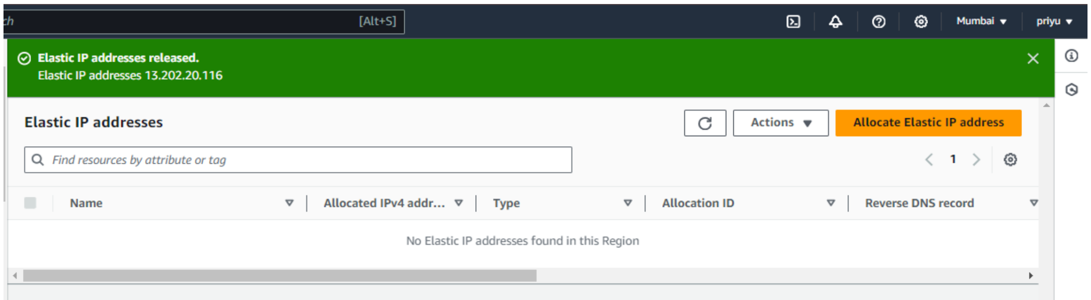
```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.20348.2461]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ping google.com

Pinging google.com [142.250.70.78] with 32 bytes of data:
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51
Reply from 142.250.70.78: bytes=32 time=2ms TTL=51

Ping statistics for 142.250.70.78:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 2ms, Average = 2ms
```

After complete the task terminate every used services. From reverse order EC2, NAT Gateway, Elastic IP, Security Group, Route Table, Subnet, VPC



Instances (2) Info

□	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
□	private-ec2	i-01ec64fae83cfa16f	Terminated	t2.micro	–	View alarms +	ap-south-1b	–
□	public-EC2	i-0d999130ed25cd46c	Terminated	t2.micro	–	View alarms +	ap-south-1a	–

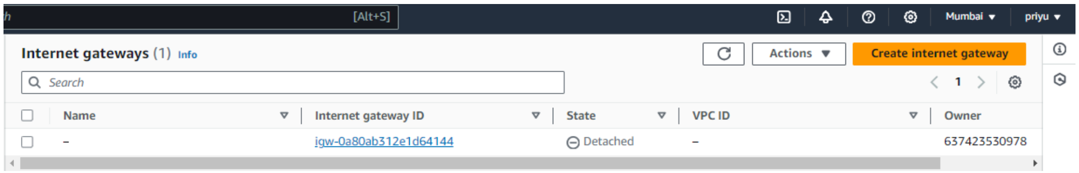


Elastic IP addresses released.
Elastic IP addresses 13.202.20.116

Elastic IP addresses

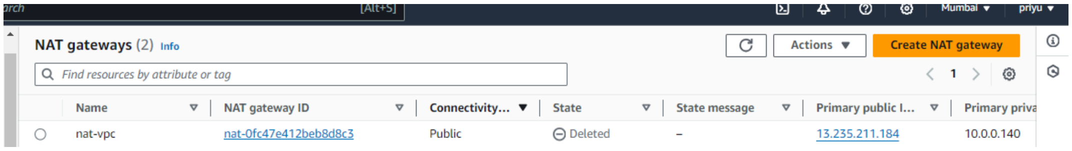
Name	Allocated IPv4 addr...	Type	Allocation ID	Reverse DNS record

No Elastic IP addresses found in this Region



Internet gateways (1) Info

□	Name	Internet gateway ID	State	VPC ID	Owner
□	–	igw-0a80ab312e1d64144	Detached	–	637423530978



NAT gateways (2) Info

○	Name	NAT gateway ID	Connectivity...	State	State message	Primary public I...	Primary priva
○	nat-vpc	nat-0fc47e412beb8d8c3	Public	Deleted	–	13.235.211.184	10.0.0.140