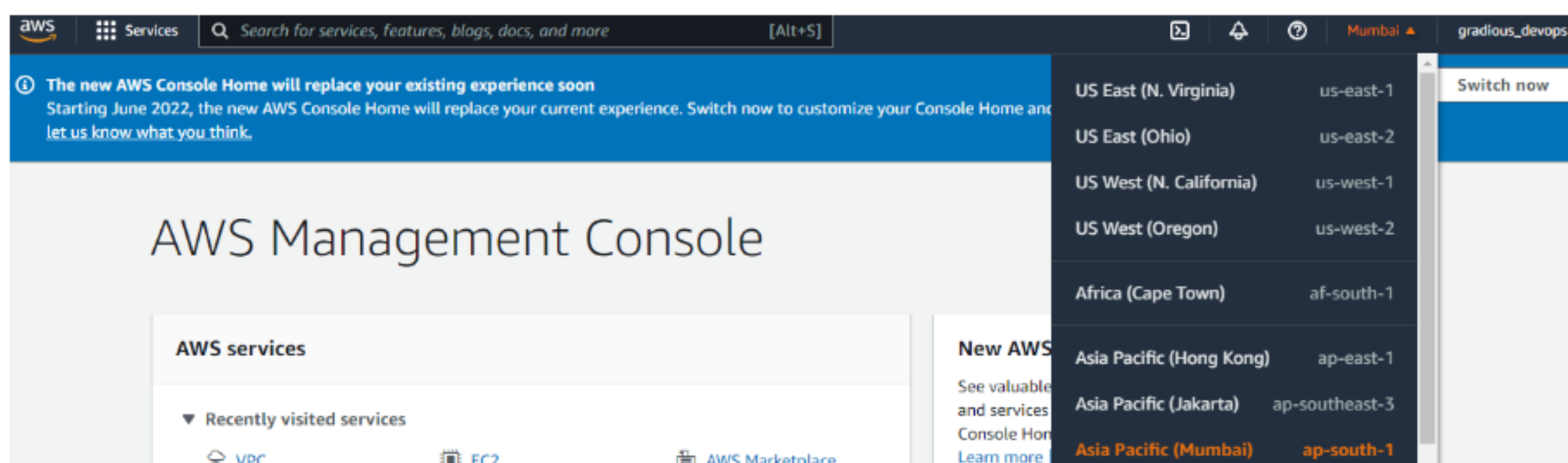
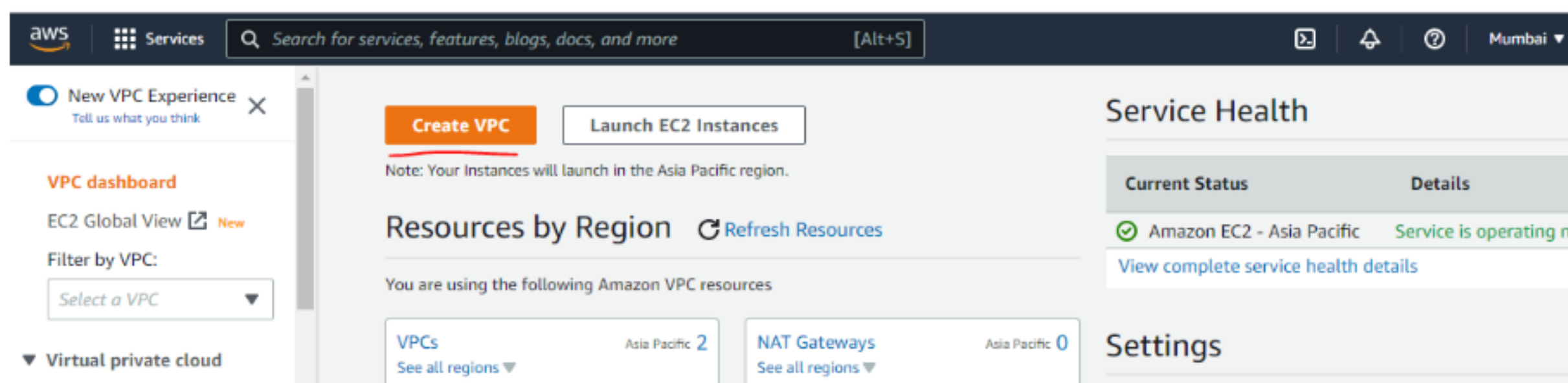


## Configure and launch EC2 public instance in AWS

1. Login to your AWS console and choose the region allocated for you from the dropdown say : Asia Pacific (Mumbai)



2. Search VPC service Create a custom VPC by selecting VPC from the services list and click on 'create VPC'



3. Select the option "VPC only" Provide any VPC tag name and in the field of IPv4 CIDR provide 10.0.0.0/16  
( you can create 2<sup>16</sup> that is 65,536 number of ip address) and click on create VPC

### 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.

my-vpc-01

**IPv4 CIDR block** [Info](#)

☒ IPv4 CIDR manual input
 ☐ IPAM-allocated IPv4 CIDR block

IPv4 CIDR

10.0.0.0/24

**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.

No tags associated with the resource.

[Add new tag](#)

You can add 50 more tags.

Cancel [Create VPC](#)

4. Your custom VPC will be created and displayed as below

**Your VPCs (1/2)** [Info](#)

Filter VPCs

	Name	VPC ID	State	IPv4 CIDR	IPv6 CIDR	DHCP options set	Main route table	Main network ACL
<input type="checkbox"/>	-	vpc-09bdae68f9f9b3f0	Available	172.31.0.0/16	-	dopt-02f4dee09420d7...	rtb-0fcba84a25a278a2	acl-0e48614e62871
<input checked="" type="checkbox"/>	VPC_1	vpc-027cfee97fd8325	Available	10.0.0.0/16	-	dopt-02f4dee09420d7...	rtb-05bf5330923f8bbd1	acl-00025d6e7ccdc1

5. Search and navigate to 'Subnet' module from the services and click on 'create subnet'

**Subnets (5)** [Info](#)

Filter subnets

Actions [Create subnet](#)

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR
<input type="checkbox"/>	public_subnet	subnet-08c8d8ffb512d6e51	Available	vpc-027cffee97fdf8325   VPC_1	10.0.2.0/24
<input type="checkbox"/>	-	subnet-0c809e91a9fbc0e84	Available	vpc-09bdaef68f9f9b3f0	172.31.32.0/20
<input type="checkbox"/>	private_subnet	subnet-0513126ad980f998a	Available	vpc-027cffee97fdf8325   VPC_1	10.0.1.0/24
<input type="checkbox"/>	-	subnet-0da1be33084cf5e60	Available	vpc-09bdaef68f9f9b3f0	172.31.16.0/20
<input type="checkbox"/>	-	subnet-084a7066fe1eaa097	Available	vpc-09bdaef68f9f9b3f0	172.31.0.0/20

Select a subnet

6. Provide the Subnet name (ex: public subnet) select the VPC that you have created Previously and navigate to the subnet settings, now select an availability zone as per your region. Provide IPv4 CIDR block (10.0.1.0/24) . Click on Create Subnet

**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 CIDR block** [Info](#)  
10.0.1.0/24

**Tags - optional**  
No tags associated with the resource.

Add new tag

You can add 50 more tags.

Remove

Add new subnet

Cancel [Create subnet](#)

7. Search and navigate to Route Table feature and click on 'create Route Table'

**Route tables (4)** [Info](#)

Filter route tables

Actions [Create route table](#)

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
<input type="checkbox"/>	-	rtb-0fcbda84a25a278a2	-	-	Yes	vpc-09bdaef68f9f9b3f0
<input type="checkbox"/>	-	rtb-05bf5330923f8bbd1	-	-	Yes	vpc-027cffee97fdf8325
<input type="checkbox"/>	public_rt	rtb-0610fba582de1a338	subnet-08c8d8ffb512d6e51	-	No	vpc-027cffee97fdf8325
<input type="checkbox"/>	private_rt	rtb-09ea7eb81cf527223	subnet-0513126ad980f998a	-	No	vpc-027cffee97fdf8325



8. Provide the name for the Route table ex: public\_rt and select the VPC that you have created and click on 'Create Route table'

### Route table settings

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

**VPC**  
The VPC to use for this route table.

vpc-027cffee97fdf8325 (VPC\_1) ▼

### 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.

No tags associated with the resource.

Add new tag

You can add 50 more tags.

Cancel

Create route table

9. Route table will be created and displayed as below

Route tables (4) Info

↻ Actions ▼ Create route table ⓘ

🔍 Filter route tables < 1 > ⚙️

<input type="checkbox"/>	Name ▼	Route table ID ▼	Explicit subnet associat...	Edge associations	Main ▼	VPC
<input type="checkbox"/>	–	rtb-0fcbda84a25a278a2	–	–	Yes	vpc-09bdaef68f9f
<input type="checkbox"/>	–	rtb-05bf5330923f8bbd1	–	–	Yes	vpc-027cffee97fd
<input type="checkbox"/>	public_rt	rtb-0610fba582de1a338	subnet-08c8d8ffb512d6...	–	No	vpc-027cffee97fd
<input type="checkbox"/>	private_rt	rtb-09ea7eb81cf527223	subnet-0513126ad980f...	–	No	vpc-027cffee97fd

◀ ▶

⌵ ⌶ ⌷

10. Now Click on subnet associations by selecting the Route Table that you have created previously

Route tables (1/4) Info

Filter route tables

	Name	Route table ID	Explicit subnet associat...	Edge associations	Main	VPC
<input type="checkbox"/>	-	rtb-0fcbda84a25a278a2	-	-	Yes	vpc-09bdaef68f9f9b3f0
<input type="checkbox"/>	-	rtb-05bf5330923f8bbd1	-	-	Yes	vpc-027cffee97fdf8325   VPC_1
<input checked="" type="checkbox"/>	public_rt	rtb-0610fba582de1a338	subnet-08c8d8ffb512d6...	-	No	vpc-027cffee97fdf8325   VPC_1
<input type="checkbox"/>	private_rt	rtb-09ea7eb81cf527223	2 subnets	-	No	vpc-027cffee97fdf8325   VPC_1

rtb-0610fba582de1a338 / public\_rt

Details Routes Subnet associations Edge associations Route propagation Tags

Explicit subnet associations (1)

Find subnet association

Edit subnet associations

11. Now click on “Edit subnet association” and make a check on the subnet that you have created and click on save changes (Note : In your case select the subnet that you have created)

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/2)

Filter subnet associations

	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input checked="" type="checkbox"/>	public_subnet	subnet-08c8d8ffb512d6e51	10.0.2.0/24	-	rtb-0610fba582de1a338 / public_rt
<input type="checkbox"/>	private_subnet	subnet-0513126ad980f998a	10.0.1.0/24	-	rtb-09ea7eb81cf527223 / private_rt

Selected subnets

subnet-08c8d8ffb512d6e51 / public\_subnet X

Cancel Save associations

12. Search and Navigate to the Internet Gateway and click on ‘Create internet gateway’

13. Provide any name to the Internet gateway and click on 'Create internet gateway' to get created . Initially the Internet Gateway will be in a detached state.

### 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.

**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

Remove

Add new tag  
You can add 49 more tags.

Cancel **Create internet gateway**

### Internet gateways (2) Info

Refresh

Actions

Create internet gateway

< 1 >

⚙

<input type="checkbox"/>	Name	Internet gateway ID	State	VPC ID	Owner
<input type="checkbox"/>	-	igw-071b1c14f35c3c121	Attached	vpc-09bdaef68f9f9b3f0	223458714469
<input type="checkbox"/>	IG_1	igw-08e2624dcb162fa1a	Detached	-	223458714469

14. Now Select the Internet Gateway you have created and click on Actions and select 'Attach to VPC' select the VPC and click on 'Attach Internet gateway'.  
Now the Internet gateway state changes to 'attached'

### Internet gateways (1/2) Info

Refresh

Actions

Create internet gateway

< 1 >

⚙

<input checked="" type="checkbox"/>	Name	Internet gateway ID	State	VPC ID
<input type="checkbox"/>	-	igw-071b1c14f35c3c121	Attached	vpc-09bdaef68f9f9b3f0
<input checked="" type="checkbox"/>	IG_1	igw-08e2624dcb162fa1a	Detached	-

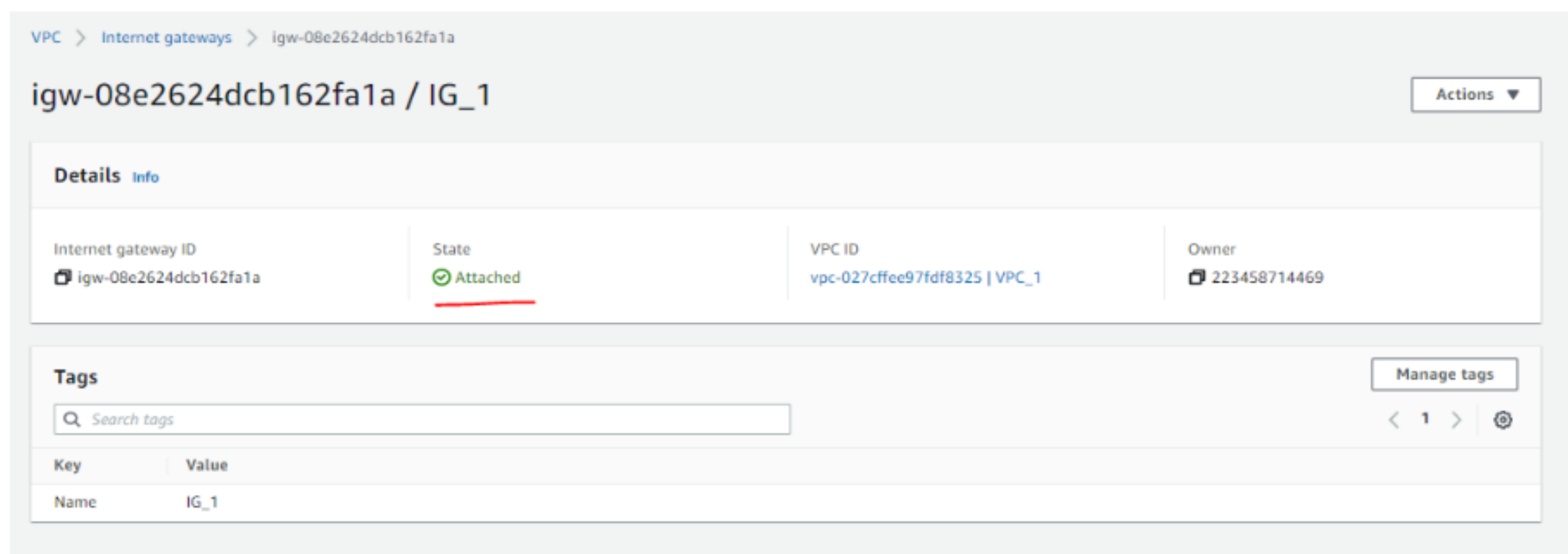
View details

Attach to VPC

Detach from VPC

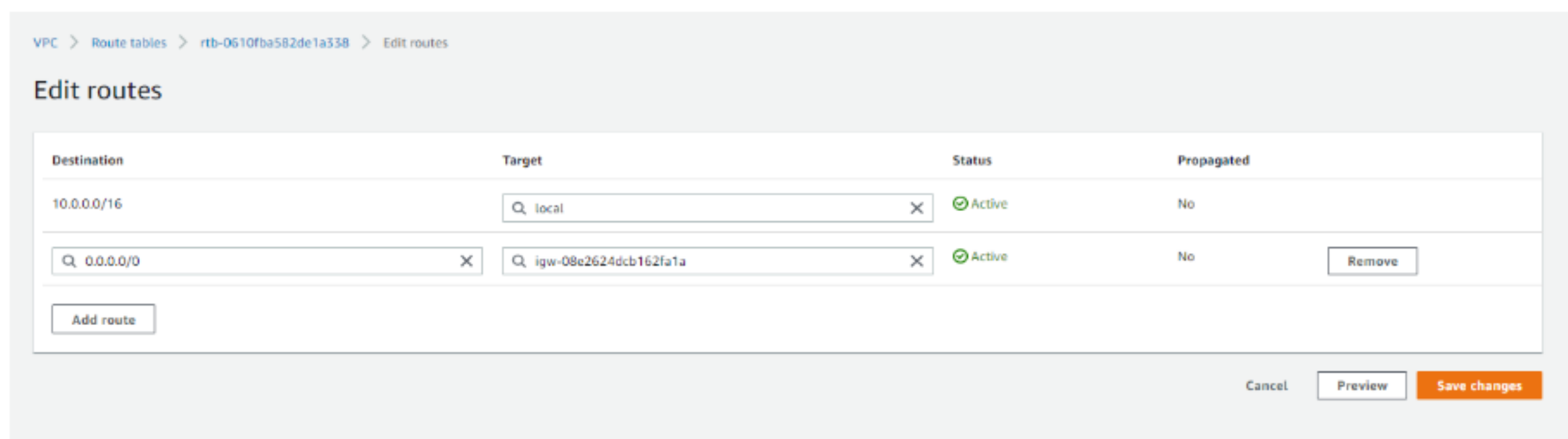
Manage tags

Delete internet gateway

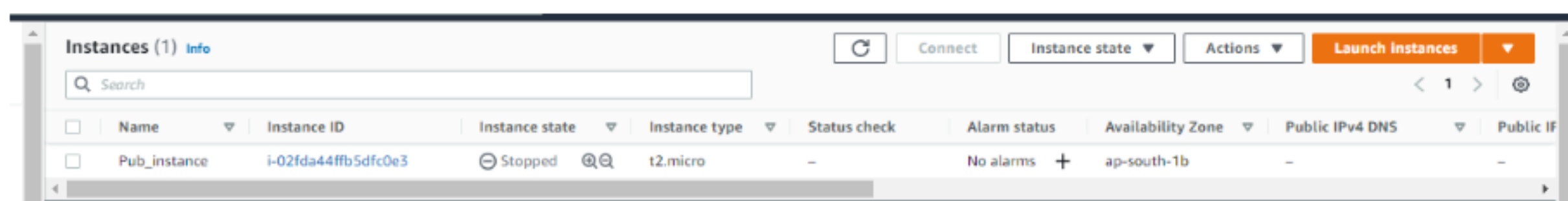


15. Navigate to Routtable , click on the route table that you have created and then click on Routes

16. Now click on Edit Routes and then Click on Add Route . Provide 0.0.0.0/0 in the Destination and in the Target select the Internet Gateway and select the IG that you have created previously. Click on Save changes.



16. Search and Navigate to 'Instances' option and click on launch instance





17. Now, you need to select the Amazon Machine image (AMI) from the from the list , select the default

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Cancel and Ex

### Step 1: Choose an Amazon Machine Image (AMI)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search for an AMI by entering a search term e.g. "Windows"

Search by Systems Manager param

Quick Start

My AMIs

AWS Marketplace

Community AMIs

☐ Free tier only ⓘ

Amazon Linux

Free tier eligible

**Amazon Linux 2 AMI (HVM) - Kernel 5.10, SSD Volume Type** - ami-08df646e18b182346 (64-bit x86) / ami-0e0aaf29e73155b91 (64-bit Arm)

Amazon Linux 2 comes with five years support. It provides Linux kernel 5.10 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.28, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

☒ 64-bit (x86)  
☐ 64-bit (Arm)

Amazon Linux

Free tier eligible

**Amazon Linux 2 AMI (HVM) - Kernel 4.14, SSD Volume Type** - ami-09de362f44ba0a166 (64-bit x86) / ami-044ba583062cb113b (64-bit Arm)

Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.28, Binutils 2.29.1, and the latest software packages through extras. This AMI is the successor of the Amazon Linux AMI that is now under maintenance only mode and has been removed from this wizard.

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

☒ 64-bit (x86)  
☐ 64-bit (Arm)

18. Now you need to choose the instance type , you can proceed with the default instance type that is being selected by clicking Next: Configure Instance Details

### Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance families Current generation Show/Hide Columns

Currently selected: t2.micro (- ECUs, 1 vCPUs, 2.5 GHz, ~, 1 GiB memory, EBS only)

	Family	Type	vCPUs ⓘ	Memory (GiB)	Instance Storage (GB) ⓘ	EBS-Optimized Available ⓘ	Network Performance ⓘ	IPv6 Support ⓘ
<input type="checkbox"/>	t2	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	t2	t2.micro <u>Free tier eligible</u>	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	t2	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t2	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	t3	t3.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.micro	2	1	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	t3	t3.small	2	2	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details

19. In the ‘configuration instance’ settings select your VPC from the network dropdown, select your public subnet that you have created , enable Auto-assign public ip, select “Use subnet setting (Ip name)” from the Hostname type and leave all other as default, Click on “Next : Add storage”



1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances	1	<a href="#">Launch into Auto Scaling Group</a>
Purchasing option	<input type="checkbox"/> Request Spot instances	
Network	vpc-027cffe97d18325   VPC_1 <a href="#">Create new VPC</a>	
Subnet	subnet-08c8d8fb512d6e51   public_subnet   ap-sou <a href="#">Create new subnet</a> 250 IP Addresses available	
Auto-assign Public IP	Enable	
Hostname type	Use subnet setting (IP name)	
DNS Hostname	<input type="checkbox"/> Enable IP name IPv4 (A record) DNS requests <input checked="" type="checkbox"/> Enable resource-based IPv4 (A record) DNS requests <input type="checkbox"/> Enable resource-based IPv6 (AAAA record) DNS requests	
Placement group	<input type="checkbox"/> Add instance to placement group	
Capacity Reservation	Open	
Domain join directory	No directory <a href="#">Create new directory</a>	
IAM role	None <a href="#">Create new IAM role</a>	
Shutdown behavior	Stop	

[Cancel](#) [Previous](#) [Review and Launch](#) [Next: Add Storage](#)

20. In storage default options are selected , you can click “Next : Add Tags”.  
provide the Name and Value as below, (it is your choice to provide any values)  
and click on ‘configure security groups’

#### Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.

A copy of a tag can be applied to volumes, instances or both.

Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances	Volumes	Network Interfaces
Name	Public instance	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add another tag](#) (Up to 50 tags maximum)

20. Now navigate to ‘Configure security group’ settings and add all the following rules which are marked and click “review & launch)  
(Note for SSH & ICMP-Ipv4 select source dropdown as My ip)

Inbound rules <a href="#">Info</a>						
Security group rule ID	Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>	Source <a href="#">Info</a>	Description - optional <a href="#">Info</a>	
sgr-0a4e430ff815d534c	SSH	TCP	22	My IP <input type="text" value="27.111.75.124/32"/>		Delete
sgr-0dea41ffea1388cc	HTTP	TCP	80	Custom <input type="text" value="0.0.0.0/0"/>		Delete
sgr-03d1c6c7e641e23a4	MYSQL/Aurora	TCP	3306	Custom <input type="text" value="10.0.0.0/16"/>		Delete
sgr-0cf4112c1b1156582	All ICMP - IPv4	ICMP	All	My IP <input type="text" value="27.111.75.124/32"/>		Delete

21. In the key pair prompt select “create a new keypair “ from the dropdown , enter the key pair name of your choice and click on download key pair, the key pair will get downloaded

(Note: copy the keypair to any of your linux machine to connect the EC2 instance )

Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key** file that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair

Key pair type

☒ RSA
 ☐ ED25519

Key pair name

test

Download Key Pair

You have to download the private key file (\*.pem file) before you can continue. Store it in a secure and accessible location. You will not be able to download the file again after it's created.

Cancel

Launch Instances

## 22. Then Click on Launch Instance

### Select an existing key pair or create a new key pair ×

A key pair consists of a **public key** that AWS stores, and a **private key** file that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Amazon EC2 supports ED25519 and RSA key pair types.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair ▼

**Key pair type**  
☒ RSA ☐ ED25519

**Key pair name**  
test

Download Key Pair

...

You have to download the **private key** file (\*.pem file) before you can continue. Store it in a **secure and accessible** location. You will not be able to download the file again after it's created.

Cancel **Launch Instances**

## 23. Now search and navigate to Instances you will be seeing the instance that is up and running state

Instances (1) <a href="#">Info</a>										
<input type="text" value="Search"/>										
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public	
<input type="checkbox"/>	Pub_instance	i-02fda44ffb5dfc0e3	<span>Running</span>	t2.micro	–	No alarms +	ap-south-1b	–	43.204	

## 24. Now select the particular instance and click “connect”

Instances (1/1) <a href="#">Info</a>										
<input type="text" value="Search"/>										
<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public	
<input checked="" type="checkbox"/>	Pub_instance	i-02fda44ffb5dfc0e3	<span>Running</span>	t2.micro	–	No alarms +	ap-south-1b	–	43.204	



## 25. Click “connect” to launch the Terminal

EC2 > Instances > i-02fda44ffb5dfc0e3 > Connect to instance

### Connect to instance [Info](#)

Connect to your instance i-02fda44ffb5dfc0e3 (Pub\_instance) using any of these options


EC2 Instance Connect

Session Manager


SSH client

EC2 serial console

Instance ID

 i-02fda44ffb5dfc0e3 (Pub\_instance)

Public IP address

 43.204.141.211

User name

ec2-user

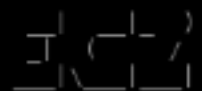
Connect using a custom user name, or use the default user name ec2-user for the AMI used to launch the instance.

**Note:** In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

Cancel

Connect

Last login: Mon Jun 27 10:28:24 2022 from ec2-13-233-177-1.ap-south-1.compute.amazonaws.com



Amazon Linux 2 AMI

<https://aws.amazon.com/amazon-linux-2/>  
[ec2-user@ip-10-0-2-17 ~]\$

## steps to Connect with the Instance using Public IP

1. Navigate to Instances page , select the public instance and click on connect
2. Click on the SSH client tab

**Connect to instance** [Info](#)  
Connect to your instance i-02fda44ffb5dfc0e3 (Pub\_instance) using any of these options

EC2 Instance Connect

Session Manager

**SSH client**

EC2 serial console

Instance ID  
i-02fda44ffb5dfc0e3 (Pub\_instance)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is test\_keypair.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.  
chmod 400 test\_keypair.pem
4. Connect to your instance using its Public IP:  
43.204.107.23

Example:  
ssh -i "test\_keypair.pem" ec2-user@43.204.107.23

**Note:** In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI user name.

3. Execute the above steps from your Linux server where you have copied the private key file .
4. You can also use putty to connect with the public instance