

**My company is running e-commerce workload in AWS cloud. During the sale servers are going to down. How can we distribute the load?**

First I launched an instance.

The screenshot shows the 'Launch an instance' wizard in the AWS Management Console. The first step, 'Name and tags', has 'Server one' entered in the 'Name' field. The second step, 'Application and OS Images (Amazon Machine Image)', shows a search bar and a 'Quick Start' tab selected. The third step, 'Summary', shows '1' instance selected, 'Amazon Linux 2023 AMI 2023.8.2...' as the software image, 't3.micro' as the virtual server type, and a 'New security group' named 'New security group'. The 'Launch instance' button is at the bottom right.

In security group I added port 22 and 80

The screenshot shows the 'Launch an instance' wizard with the security group configuration step highlighted. It lists two rules: one for SSH (TCP port 22) from 'Anywhere' and another for HTTP (TCP port 80) from a 'Custom' source. A warning message at the bottom states: '⚠️ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules.' The right side of the screen shows the 'Summary' step with the same instance details as the previous screenshot, including the 'New security group'.

Then i added the script to run the apache server.

The screenshot shows the AWS EC2 'Launch an instance' wizard. On the left, under 'User data', there is a text area containing a shell script:

```
#!/bin/bash
sudo yum install httpd -y
echo "Hello" > /var/www/html/index.html
sudo systemctl start httpd
sudo systemctl enable httpd
```

Below the text area is a checkbox:  User data has already been base64 encoded.

On the right, the 'Summary' section shows the following configuration:

- Number of instances:** 1
- Software Image (AMI):** Amazon Linux 2023 AMI 2023.8.2... [read more](#) ami-0de716d6197524dd9
- Virtual server type (instance type):** t2.micro
- Firewall (security group):** New security group
- Storage (volumes):** 1 x 20 GiB

At the bottom right are 'Cancel', 'Launch instance', and 'Preview code' buttons.

Then I launched an another instance with same security group and the script.

aws Search [Alt+S] United States (N. Virginia) Account ID: 1491-4208-2303 Itimindtree\_10840047

EC2 > Instances > Launch an instance

### Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

**Name and tags Info**

Name  Add additional tags

**Application and OS Images (Amazon Machine Image) Info**

An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose **Browse more AMIs**.

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

Recents My AMIs Quick Start

**Summary**

Number of instances Info 1

Software Image (AMI)

Virtual server type (instance type) t3.micro

Firewall (security group)

Storage (volumes)

Cancel Launch instance Preview code

aws Search [Alt+S] United States (N. Virginia) Account ID: 1491-4208-2303 Itimindtree\_10840047

EC2 > Instances > Launch an instance

### Network settings Info

VPC - required Info

vpc-096ee5d9060f72b59 (default)

Subnet Info

subnet-024ffa37df91f65c6 VPC: vpc-096ee5d9060f72b59 Owner: 149142082303 Availability Zone: us-east-1b (use1-a2z) Zone type: Availability Zone IP addresses available: 4089 CIDR: 172.31.16.0/20

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

Security group name - required launch-wizard-1

**Summary**

Number of instances Info 1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.8.2... [read more](#) ami-0de716d6197524dd9

Virtual server type (instance type) t3.micro

Firewall (security group)

New security group

Storage (volumes)

Cancel Launch instance Preview code

aws Search [Alt+S] United States (N. Virginia) Account ID: 1491-4208-2303 Itimindtree\_10840047

EC2 > Instances > Launch an instance

Upload a file with your user data or enter it in the field.

```
#!/bin/bash
sudo yum install httpd -y
echo "Hello Server 2" > /var/www/html/index.html
sudo systemctl start httpd
sudo systemctl enable httpd
```

User data has already been base64 encoded

**Summary**

Number of instances Info 1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.8.2... [read more](#) ami-0de716d6197524dd9

Virtual server type (instance type) t3.micro

Firewall (security group)

New security group

Storage (volumes)

Cancel Launch instance Preview code

Then I copied the public ip of both the instances and pasted it in the browser with port 80 to check if it's working

The image contains two separate browser windows side-by-side. Both windows have a header bar with tabs, a search bar, and various icons. The top window's address bar shows '54.81.196.45' and the bottom window's shows '18.209.62.19'. Both windows display the text 'Hello' or 'Hello Server 2' in large, bold, black font on a white background.

I went to Target groups section and created a target group.

The screenshot shows the AWS Management Console interface for the EC2 service. The left sidebar has a navigation tree with 'EC2' selected, followed by 'Target groups', 'Elastic Block Store', 'Network & Security' (with 'Security Groups' expanded), 'Load Balancing' (with 'Target Groups' selected), and 'Auto Scaling'. The main content area is titled 'Target groups' and shows a table with columns: Name, ARN, Port, Protocol, Target type, and Load balancer. A message at the top right says 'No target groups' and 'You don't have any target groups in us-east-1'. Below the table, it says '0 target groups selected' and 'Select a target group above.' There is a prominent orange button labeled 'Create target group'.

Target group name

asmitt-target

A maximum of 32 alphanumeric characters including hyphens are allowed, but the name must not begin or end with a hyphen.

Protocol

Protocol for load balancer-to-target communication. Can't be modified after creation.

HTTP

Port

Port number where targets receive traffic. Can be overridden for individual targets during registration.

80

1-65535

IP address type

Only targets with the indicated IP address type can be registered to this target group.

IPv4

Each instance has a default network interface (eth0) that is assigned the primary private IPv4 address. The instance's primary private IPv4 address is the one that will be applied to the target.

IPv6

Each instance you register must have an assigned primary IPv6 address. This is configured on the instance's default network interface (eth0). [Learn more](#)

VPC

Select the VPC with the instances that you want to include in the target group. Only VPCs that support the IP address type selected above are available in this list.

vpc-096ee5d9060f72b59

(default)



[Create VPC](#)

[Include as pending below](#)

2 selections are now pending below. Include more or register targets when ready.

Review targets

Targets (2)

Filter targets

Show only pending

Instance ID	Name	Port	State	Security groups	Zone	Private IPv4 address	Subnet ID
i-0b0c9cd8e52d6b24c	Server Two	80	<span>Running</span>	server-server	us-east-1b	172.31.30.77	subnet-024f
i-06ee5e8ec6864e472	Server One	80	<span>Running</span>	server-server	us-east-1a	172.31.92.55	subnet-0bec

2 pending

[Cancel](#)

[Previous](#)

[Create target group](#)

Success Successfully created the target group: **asmitt-target**. Anomaly detection is automatically applied to all registered targets. Results can be viewed in the Targets tab.

asmitt-target

[Actions](#)

Details

arn:aws:elasticloadbalancing:us-east-1:149142082303:targetgroup/asmitt-target/138f5ba0caf38ece

Target type

Instance

Protocol : Port

HTTP: 80

Protocol version

HTTP1

VPC

[vpc-096ee5d9060f72b59](#)

IP address type

IPv4

Load balancer

[None associated](#)

2  
Total targets

0

Healthy

0

Unhealthy

2

Unused

0

Initial

0

Draining

0 Anomalous

Distribution of targets by Availability Zone (AZ)

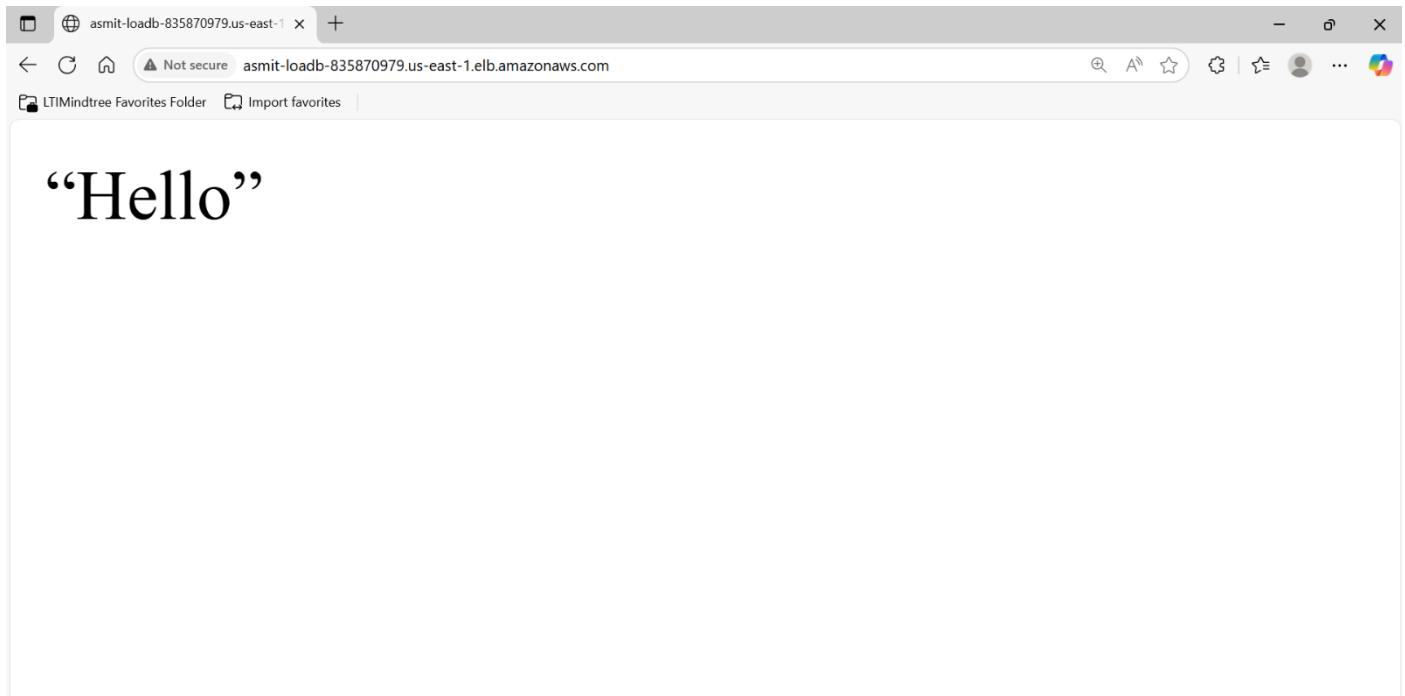
Then I created a load balancer with the target group I just created.

The screenshot shows the 'Create Application Load Balancer' wizard. In the 'Basic configuration' step, the 'Load balancer name' is set to 'asmits-loadb'. The 'Scheme' is chosen as 'Internet-facing', which is described as serving internet-facing traffic with public IP addresses. The 'Internal' scheme is also listed, which serves internal traffic with private IP addresses. The 'CloudShell' and 'Feedback' buttons are at the bottom left, and the footer includes copyright information and links for Privacy, Terms, and Cookie preferences.

The screenshot shows the 'Load balancers' page with one item listed: 'asmits-loadb'. A green notification box says 'Successfully created load balancer: asmits-loadb'. Below it, a message states: 'It might take a few minutes for your load balancer to fully set up and route traffic. Targets will also take a few minutes to complete the registration process and pass initial health checks.' There is an 'Edit IP pools' button. On the left sidebar, under 'Network & Security', 'Security Groups' is selected. The 'Actions' dropdown and 'Create load balancer' button are at the top right.

Then I copied the dns name of the load balancer and pasted it on the browser and when I kept refreshing the page was getting switched between the instances I created.

The screenshot shows the 'Load balancers' page with one item listed: 'asmits-loadb'. The 'Actions' dropdown and 'Create load balancer' button are at the top right. The 'Load balancer: asmits-loadb' details page is open, showing the ARN and DNS name. A tooltip indicates the DNS name has been copied. The 'Actions' dropdown and 'Create load balancer' button are at the top right of this page.



**My one team is working within Mumbai India Region, and they have some important data in the ebs volume, and another team is working within Singapore region. They also want to access same data which is available in Mumbai Region. Share it in different regions.**

First, I created an instance in N. Virginia, since Mumbai and Singapore were not accessible, I chose two regions N. Virginia and Ohio.

The screenshot shows the 'Launch an instance' wizard. In the 'Name and tags' section, the name 'Server One' is entered. Under 'Application and OS Images (Amazon Machine Image)', a search bar is shown with the placeholder 'Search our full catalog including 1000s of application and OS images'. Below it, a 'Quick Start' tab is selected. On the right, the 'Summary' panel shows 1 instance, the software image as Amazon Linux 2023 AMI 2023.8.2..., and the virtual server type as t2.micro. A large orange 'Launch instance' button is at the bottom right.

The screenshot shows the 'Network settings' section of the 'Launch an instance' wizard. It includes fields for VPC (set to default), Subnet (selected as 'subnet-0bec6ba741e27e1c0'), Auto-assign public IP (set to 'Enable'), and Firewall (security groups) (set to 'Create security group'). On the right, the 'Summary' panel shows 1 instance, the software image as Amazon Linux 2023 AMI 2023.8.2..., and the virtual server type as t2.micro. A large orange 'Launch instance' button is at the bottom right.

The screenshot shows the AWS EC2 Instances page. On the left, there's a navigation sidebar with sections like EC2, Dashboard, EC2 Global View, Events, Instances (selected), Instances Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, and Images (AMIs, AMI Catalog). The main content area is titled 'Instances (1) Info' and shows a single instance named 'Server One' with the ID i-03188f96765bc80bb, which is 'Running'. It's a t2.micro instance in the us-east-1 availability zone. There are buttons for 'Connect', 'Actions', and 'Launch instances'.

Then I created a volume of 5 gb of gp2 type and attached it with the instance I just created.

The screenshot shows the AWS Volumes Create volume page. In the 'Volume settings' section, the 'Volume type' is set to 'General Purpose SSD (gp2)', 'Size (GiB)' is 5, 'IOPS' is 100 / 3000, and 'Throughput (MiB/s)' is Not applicable. The 'Availability Zone' dropdown is also visible. Below this, a success message says 'Successfully created volume vol-087d69415f3ce8ad2.' The main content area then shows the 'Volumes (1/2) Info' page with a table listing two volumes: 'Server One' (vol-087d69415f3ce8ad2, gp2, 5 GiB, 100 IOPS) and 'Root server1' (vol-0c20179d4cfcec911, gp2, 8 GiB, 100 IOPS). There are buttons for 'Actions' and 'Create volume'.

The screenshot shows the AWS Volumes page with two volumes listed:

Name	Volume ID	Type	Size	IOPS
Server One	vol-087d69415f3ce8ad2	gp2	5 GiB	100
Root server1	vol-0c20179d4cfcec911	gp2	8 GiB	100

A context menu is open for the first volume, showing options like Modify volume, Create snapshot, and Attach volume. The 'Attach volume' option is highlighted.

Below the table, a detailed view for the selected volume (vol-087d69415f3ce8ad2) is shown:

Details	Status checks	Monitoring	Tags
Volume ID vol-087d69415f3ce8ad2 (Server One)	Size 5 GiB	Type gp2	Status check Okay
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer f or recommendations.   Learn more	Volume state Available	IOPS 100	Throughput -

The bottom section shows the 'Attach volume' process for the selected volume:

### Attach volume

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

**Basic details**

Volume ID: vol-087d69415f3ce8ad2 (Server One)

Availability Zone: us-east-1a

Instance: i-03188f96765bc80bb (Server One) (running)

Device name: Select a device name

Only instances in the same Availability Zone as the selected volume are displayed.

Successfully attached volume vol-087d69415f3ce8ad2 to instance i-03188f96765bc80bb.

Then I launched the server in my terminal.

```
root@nv:~          X + V - D X

Windows PowerShell
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PS C:\Users\10840047\Downloads> ssh -i "nv-server.pem" ec2-user@ec2-34-227-151-171.compute-1.amazonaws.com
The authenticity of host 'ec2-34-227-151-171.compute-1.amazonaws.com (34.227.151.171)' can't be established.
ED25519 key fingerprint is SHA256:KccjxZU6Adg0xRP4XTz753QxX+Hn5YRumydlqmuDvJo.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-34-227-151-171.compute-1.amazonaws.com' (ED25519) to the list of known hosts.

          _#
  _\_\_ #####_      Amazon Linux 2023
~~ \_\_#####\_
~~   \#\#|
~~     \#/ --- https://aws.amazon.com/linux/amazon-linux-2023
~~       \~`' '-->
~~         /
~~ ._. /_/
~~ /_m/ ,/_/`_/
[ec2-user@ip-172-31-89-234 ~]$ sudo hostnamectl set-hostname nv.server.com
[ec2-user@ip-172-31-89-234 ~]$ sudo su -
[root@nv ~]#
```

Then I ran command `lsblk` to check the new volume and gave file system ext4 to it and then I mounted the disk in `/data`.

```
[root@nv ~]# lsblk
NAME   MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda    202:0    0  8G  0 disk
└─xvda1  202:1    0  8G  0 part /
├─xvda127 259:0    0  1M  0 part
└─xvda128 259:1    0 10M  0 part /boot/efi
xvdb    202:16   0  5G  0 disk
[root@nv ~]# mkfs.ext4 /dev/xvdb
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 1310720 4k blocks and 327680 inodes
Filesystem UUID: 2fbc5152-699e-400f-a576-809f2ebcc2ef
Superblock backups stored on blocks:
            32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

[root@nv ~]# mkdir /data
[root@nv ~]# mount /dev/xvdb /data
[root@nv ~]#
```

As this mounting process is temporary so to make it permanent, I added the below text in vim /etc/fstab

```
[root@nv ~]# blkid  
/dev/xvda128: SEC_TYPE="msdos" UUID="0A45-DE8A" BLOCK_SIZE="512" TYPE="vfat" PARTLABEL="EFI System Partition" PARTUUID="b49445c0-fd04-4205-b814-60d7234c99d3"  
/dev/xvda127: PARTLABEL="BIOS Boot Partition" PARTUUID="fe94459e-51c8-47f1-8099-83b1a7d957d3"  
/dev/xvda1: LABEL="/" UUID="096a1b2c-d815-4f9c-b224-dc88341d1513" BLOCK_SIZE="4096" TYPE="xfs" PARTLABEL="Linux" PARTUUID="3514fe78-b5f9-4d8e-9584-21d19d818c88"  
/dev/xvdb: UUID="2fbc5152-699e-400f-a576-809f2ebcc2ef" BLOCK_SIZE="4096" TYPE="ext4"  
[root@nv ~]#  
[root@nv ~]# vim /etc/fstab  
[root@nv ~]# |
```

After mounting the changes, I created 10 files inside /data to check if it's reflecting in the another region.

```
[root@nv ~]# mount -a
[root@nv ~]# df -h
Filesystem      Size   Used  Avail Use% Mounted on
devtmpfs        4.0M    0     4.0M  0% /dev
tmpfs          475M    0     475M  0% /dev/shm
tmpfs          190M  444K  190M  1% /run
/dev/xvda1      8.0G  1.6G  6.5G 20% /
tmpfs          475M    0     475M  0% /tmp
/dev/xvda128    10M   1.3M  8.7M 13% /boot/efi
tmpfs          95M    0     95M  0% /run/user/1000
/dev/xvdb      4.9G  24K  4.6G  1% /data
[root@nv ~]# cd /data
[root@nv data]# ls
lost+found
[root@nv data]# touch devops.text{1..10}
[root@nv data]# ls
devops.text1  devops.text2  devops.text4  devops.text6  devops.text8  lost+found
devops.text10 devops.text3  devops.text5  devops.text7  devops.text9
[root@nv data]# |
```

I created a snapshot of that volume.

Create a point-in-time snapshot of an EBS volume and use it as a baseline for new volumes or for data backup. You can create snapshots from an individual volume, or you can create multi-volume snapshots from all of the volumes attached to an instance.

**Source**

Resource type [Info](#)

Volume  
Create a snapshot from a specific volume.

Instance  
Create multi-volume snapshots from an instance.

**Volume ID**  
The volume from which to create the snapshot.  
vol-087d69415f3ce8ad2 (Server One)  
us-east-1a

Successfully created snapshot snap-0df49d6c265199cbf.

Owned by me	Name	Snapshot ID	Full snapshot size	Volume size	Description	Storage tier	Snapsh
	NV Server	snap-0df49d6c265199cbf	-	5 GiB	-	Standard	Peni

**Snapshot ID: snap-0df49d6c265199cbf (NV Server)**

Details	Snapshot settings	Storage tier	Tags
Snapshot ID snap-0df49d6c265199cbf (NV Server)	Full snapshot size -	Progress 0%	Snapshot status Pending

Then I copied the snapshot to Ohio region.

Snapshots (1/1) Info

Name	Snapshot ID	Full snapshot size	Volume size	Description
NV Server	snap-0df49d6c265199cbf	152 MiB	5 GiB	-

Last updated 1 minute ago

Actions ▾

- Create volume from snapshot
- Create image from snapshot
- Copy snapshot**
- Launch copy duration calculator
- Delete snapshot
- Manage tags
- Snapshot settings
- Archiving

Snapshot ID: snap-0df49d6c265199cbf (NV Server)

Details Snapshot settings Storage tier Tags

**Copy snapshot** Info

Copy a snapshot from one AWS Region to another, or within the same Region.

**Source snapshot**

The original snapshot that is to be copied.

**Snapshot ID**  
snap-0df49d6c265199cbf (NV Server)

**Region**  
us-east-1

**Snapshot copy details**

**Description**  
A description for the snapshot copy.  
[Copied snap-0df49d6c265199cbf from us-east-1]

255 characters maximum.

**Destination Region**  
The Region in which to create the snapshot copy.  
us-east-2

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In Ohio, the snapshot was showing and then I created a volume from this snapshot.

Snapshots (1/1) Info

Name	Snapshot ID	Full snapshot size	Volume size	Description	Storage tier	Snapshot status
NV Server	snap-0b10657f1c6f80da4	-	5 GiB	[Copied snap-0df49d6c265199...]	Standard	Pending

Last updated less than a minute ago

Actions ▾

EC2

Instances

Snapshot ID: snap-0b10657f1c6f80da4 (NV Server)

Details Snapshot settings Storage tier Tags

Snapshot ID: snap-0b10657f1c6f80da4 (NV Server)

Full snapshot size: -

Progress: 0%

Snapshot status: Pending

Snapshots (1/1) [Info](#)

Last updated less than a minute ago

Actions ▾

Create volume from snapshot

Create image from snapshot

Copy snapshot

Launch copy duration calculator

Delete snapshot

Manage tags

Snapshot settings

Archiving

Name	Snapshot ID	Full snapshot size	Volume size
NV Server	snap-0b10657f1c6f80da4	152 MiB	5 GiB

Snapshot ID: snap-0b10657f1c6f80da4 (NV Server)

EC2 > Snapshots > snap-0b10657f1c6f80da4 > Create volume

### Create volume [Info](#)

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.

**Volume settings**

Snapshot ID  
[snap-0b10657f1c6f80da4 \(NV Server\)](#)

Volume type [Info](#)  
General Purpose SSD (gp2)

Size (GiB) [Info](#)  
5  
Min: 1 GiB, Max: 16384 GiB.

IOPS [Info](#)  
100 / 3000  
Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS.

Successfully created volume vol-07fc30a2bff654f4.

Volumes (1/1) [Info](#)

Last updated less than a minute ago

Actions ▾

Create volume

Name	Type	Size	IOPS	Throughput	Snapshot ID	Source volume ID
NV-Ohio	gp2	5 GiB	100	-	snap-0b1065...	-

Volume ID: vol-07fc30a2bff654f4 (NV-Ohio)

**Details** [Status checks](#) [Monitoring](#) [Tags](#)

Volume ID <a href="#">vol-07fc30a2bff654f4 (NV-Ohio)</a>	Size 5 GiB	Type gp2	Status check Okay
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations.   <a href="#">Learn more</a>	Volume state Available	IOPS 100	Throughput -

After creating the volume I launched an instance in Ohio region.

The screenshot shows the AWS EC2 Instances Launch wizard and the Instances page side-by-side.

**Launch an instance (Left Panel):**

- Name and tags:** Name is set to "Ohio Server".
- Software Image (AMI):** Amazon Linux 2023.8.2... (ami-0169aa51f6faf20d5).
- Virtual server type (instance type):** t2.micro.
- Firewall (security group):** New security group.
- Storage (volumes):** One volume attached.
- Actions:** Buttons for "Launch instance" (orange) and "Preview code".

**Instances (Right Panel):**

- Instances (1):** Ohio Server (i-0e81dfe07e47b9206), Instance state: Pending, Instance type: t2.micro, Status check: -, Alarm status: View alarms +, Availability Zone: us-east-2a.
- Select an instance:** A dropdown menu showing "Ohio Server".

Both panels include standard AWS navigation and footer links.

Then I attached the volume to the instance and launched it in the terminal

aws | Search [Alt+S] | United States (Ohio) | Account ID: 1491-4208-2303  
EC2 > Volumes > vol-07fca30a2bff654f4 > Attach volume

## Attach volume Info

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

### Basic details

**Volume ID**  
[vol-07fca30a2bff654f4 \(NV-Ohio\)](#)

**Availability Zone**  
us-east-2a

**Instance** [Info](#)  
i-0e81dfe07e47b9206 (Ohio Server (running)) 

Only instances in the same Availability Zone as the selected volume are displayed.

**Device name** [Info](#)  
/dev/sdb

Recommended device names for Linux: /dev/xvda for root volume, /dev/sd[f-p] for data volumes.

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root@nv:/data x root@ohio:- x + - ×

```
Windows PowerShell
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PS C:\Users\10840047> cd downloads
PS C:\Users\10840047\downloads> ssh -i "ohio-key.pem" ec2-user@ec2-18-117-104-191.us-east-2.compute.amazonaws.com
The authenticity of host 'ec2-18-117-104-191.us-east-2.compute.amazonaws.com (18.117.104.191)' can't be established.
ED25519 key fingerprint is SHA256:N8aLk/UNDw0Q99xf3pU5VBmNYmx2oj8drTb+mof3U.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-18-117-104-191.us-east-2.compute.amazonaws.com' (ED25519) to the list of known hosts.

          #
          _###_
         _##_##_
        \##|
       \#/ --- https://aws.amazon.com/linux/amazon-linux-2023
      \v'-'>
     /`_/
    /_`_/
   /_`_/
  /_`_/
 /_`_/
[ec2-user@ip-172-31-3-67 ~]$ sudo hostnamectl set-hostname ohio.server.com
[ec2-user@ip-172-31-3-67 ~]$ sudo su -
[root@ohio ~]# |
```

In terminal I gave file system to the disk and mounted it in the /data directory and checked if the files are present.

```
[root@ohio ~]# lsblk
NAME      MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
xvda      202:0   0 8G  0 disk
└─xvda1    202:1   0 8G  0 part /
└─xvda127 259:0   0 1M  0 part
└─xvda128 259:1   0 10M 0 part /boot/efi
xvdb      202:16  0 5G  0 disk
[root@ohio ~]# mkfs.ext4 /dev/xvdb
mke2fs 1.46.5 (30-Dec-2021)
/dev/xvdb contains a ext4 file system
        last mounted on /data on Sat Aug 16 08:51:12 2025
Proceed anyway? (y,N) y
Creating filesystem with 1310720 4k blocks and 327680 inodes
Filesystem UUID: 89055840-8c6a-4fe6-9e0f-dfd642b1c83f
Superblock backups stored on blocks:
            32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

[root@ohio ~]# mkdir /data
[root@ohio ~]# mount /dev/xvdb /data
[root@ohio ~]# cd /data
```

And the files were present.

```
[root@ohio data]# ls
devops.txt1  devops.txt2  devops.txt4  devops.txt6  devops.txt8  lost+found
devops.txt10  devops.txt3  devops.txt5  devops.txt7  devops.txt9
[root@ohio data]# |
```

## Create two custom VPC, one in North Virginia and another is in Ohio Region. Configure VPC peering in between North Virginia and Ohio.

At first, I created a vpc in North Virginia region.

The screenshot shows the 'Create VPC' page in the AWS VPC service. Under 'VPC settings', the 'Resources to create' dropdown is set to 'VPC only'. A 'Name tag - optional' field contains 'nv-vpc'. Under 'IPv4 CIDR block', 'IPv4 CIDR manual input' is selected, and the CIDR block '10.0.0.0/24' is specified. The page includes a note about the CIDR block size being between /16 and /28.

The screenshot shows the 'VPC dashboard' page. A success message at the top states 'You successfully created vpc-0b5eccccc2b02001cc / nv-vpc'. The main card displays details for the VPC, including its ID, state (Available), and various configuration parameters like DNS resolution, Main network ACL, and Block Public Access. Below the main card are tabs for 'Resource map', 'CIDRs', 'Flow logs', 'Tags', and 'Integrations'. The 'Resource map' tab is currently selected.

Then created an Internet Gateway and attached it with the vpc

The screenshot shows the 'Create internet gateway' page. It includes sections for 'Internet gateway settings' (with a 'Name tag' field containing 'nv-igw') and 'Tags - optional' (with a table showing a single tag 'Name: nv-igw, Value: nv-igw'). At the bottom, there are buttons for 'Cancel' and 'Create internet gateway'.

VPC > Internet gateways > igw-0c99fbddc47454c95

The following internet gateway was created: igw-0c99fbddc47454c95 - nv-igw. You can now attach to a VPC to enable the VPC to communicate with the internet.

### igw-0c99fbddc47454c95 / nv-igw

**Details** [Info](#)

Internet gateway ID <a href="#">igw-0c99fbddc47454c95</a>	State Detached	VPC ID -	Owner <a href="#">149142082303</a>
--	-------------------	-------------	---------------------------------------

**Tags** [Manage tags](#)

Key	Value
Name	nv-igw

VPC > Internet gateways > Attach to VPC (igw-0c99fbddc47454c95)

### Attach to VPC (igw-0c99fbddc47454c95) [Info](#)

#### 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.



#### AWS Command Line Interface command

[Cancel](#)
[Attach internet gateway](#)

VPC > Internet gateways > igw-0c99fbddc47454c95

Internet gateway igw-0c99fbddc47454c95 successfully attached to vpc-0b5ecccc2b02001cc

### igw-0c99fbddc47454c95 / nv-igw

**Details** [Info](#)

Internet gateway ID <a href="#">igw-0c99fbddc47454c95</a>	State Attached	VPC ID <a href="#">vpc-0b5ecccc2b02001cc   nv-vpc</a>	Owner <a href="#">149142082303</a>
--	-------------------	--	---------------------------------------

**Tags** [Manage tags](#)

Key	Value
Name	nv-igw

Then I created a subnet of my vpc.

The screenshot shows the 'Create subnet' page in the AWS VPC console. In the 'VPC' section, the VPC ID is set to 'vpc-0b5ecccc2b02001cc (nv-vpc)'. Under 'Associated VPC CIDRs', the IPv4 CIDR is specified as '10.0.0.0/16'. In the 'Subnet settings' section, it says 'Specify the CIDR blocks and Availability Zone for the subnet.' A single subnet is being created, labeled 'Subnet 1 of 1'. The 'Subnet name' field is filled with 'nv-public'. The page includes standard AWS navigation and status indicators at the top.

The screenshot shows the 'Subnets' page in the AWS VPC console. A success message at the top states 'You have successfully created 1 subnet: subnet-0be230edbad370da4'. The main table lists one subnet: 'nv-public' with Subnet ID 'subnet-0be230edbad370da4', State 'Available', VPC 'vpc-0b5ecccc2b02001cc | nv-vpc', and Block Public setting 'Off'. The left sidebar shows the 'Virtual private cloud' section with 'Your VPCs' and 'Route tables' options.

Then I created a route table

The screenshot shows the 'Create route table' page in the AWS VPC console. It's titled 'Create route table' and describes how route tables forward packets between subnets and the internet. In the 'Route table settings' section, the name is set to 'nv-public' and the VPC is selected as 'vpc-0b5ecccc2b02001cc (nv-vpc)'. The 'Tags' section allows adding a tag named 'Name' with value 'nv-public'. There is also an 'Add new tag' button and a note about adding more tags.

The screenshot shows the 'Route tables' page in the AWS VPC console. A success message at the top states 'Route table rtb-0777716d8759f99cd | nv-public was created successfully.' The main table shows one route table: 'rtb-0777716d8759f99cd / nv-public'. The 'Details' section provides information: Route table ID 'rtb-0777716d8759f99cd', Main 'No', Owner ID '149142082303', Explicit subnet associations (empty), and Edge associations (empty). The left sidebar shows the 'Virtual private cloud' section with 'Your VPCs', 'Subnets', 'Route tables', and 'Internet gateways' options.

In the route table, I added the internet gateway

The screenshot shows the 'Edit routes' section of the AWS VPC Route Tables page. A new route is being added for destination 10.0.0.0/16, targetting the Internet Gateway (igw-0c99fbddc47454c95). The route is set to 'Active' and 'No' propagation. The 'Route Origin' is 'CreateRouteTable'. There is a 'Remove' button next to the gateway entry. At the bottom are 'Add route', 'Cancel', 'Preview', and 'Save changes' buttons.

Then added the subnet association

The screenshot shows the 'Edit subnet associations' section of the AWS VPC Route Tables page. A subnet (subnet-0be230edbad370da4) is being associated with the route table. The 'Available subnets' table shows one entry: 'nv-public' with Subnet ID 'subnet-0be230edbad370da4' and IPv4 CIDR '10.0.0.0/24'. The 'Selected subnets' table contains the same entry. At the bottom are 'Cancel' and 'Save associations' buttons.

The screenshot shows the main VPC Route Tables page. A success message indicates that subnet associations have been updated for route table 'rtb-0777716d8759f99cd / nv-public'. The 'Details' section shows the route table ID, VPC, and explicit subnet associations. The 'Routes' section lists two routes: one to '0.0.0.0/0' via the Internet Gateway and another to '10.0.0.0/16' via 'local'. At the bottom are 'CloudShell', 'Feedback', and footer links.

After that, I launched an instance in same North Virginia region with my vpc and subnet.

The screenshot shows the 'Launch an instance' wizard. In the 'Name and tags' step, the name is set to 'nv-server'. In the 'Application and OS Images (Amazon Machine Image)' step, the software image is set to 'Amazon Linux 2023 AMI 2023.8.2...'. The virtual server type is 't2.micro'. A new security group named 'New security group' is selected. The storage volume is set to 'Amazon EBS (General Purpose SSD)'. The summary shows 1 instance. The 'Launch instance' button is highlighted in orange.

The screenshot shows the 'Network settings' step. The VPC is 'vpc-0b5eccccc2b02001cc (nv-vpc)'. The subnet is 'subnet-0be230edbad370da4'. The security group is 'New security group'. The summary shows 1 instance. The 'Launch instance' button is highlighted in orange.

I added the port 22 and all ICMP Ipv4 in the security group.

The screenshot shows the 'Security group rules' step. It adds two rules: one for SSH (TCP port 22) from 'Anywhere' and one for All ICMP - IPv4 (ICMP port All) from 'Custom'. The summary shows 1 instance. The 'Launch instance' button is highlighted in orange.

The screenshot shows the 'Instances' page. It lists one instance named 'nv-server' with the ID 'i-08fa467189901bb7b'. The instance is running in the 'us-east-1a' availability zone. The 'Actions' dropdown menu is open, showing options like 'Stop', 'Start', 'Reboot', and 'Delete'.

After that I did all of the above process in Ohio region too like created a vpc, internet gateway, attached the igw to vpc, then created a subnet as well as a route table and add the igw in that rout.

The screenshot shows the 'Create VPC' settings page. Under 'Resources to create', 'VPC only' is selected. A 'Name tag - optional' field contains 'ohio-vpc'. Under 'IPv4 CIDR block', 'IPv4 CIDR manual input' is selected, and the CIDR block '20.0.0.0/16' is entered. A note states 'CIDR block size must be between /16 and /28.'

The screenshot shows the VPC dashboard. A success message says 'You successfully created vpc-08d38ffa9b4745b76 / ohio-vpc'. The VPC details are listed: VPC ID: vpc-08d38ffa9b4745b76, State: Available, Block Public Access: Off, DNS hostnames: Disabled, Main network ACL: acl-0b0e93b9c2018dc92, DHCP option set: dopt-06b86aa5ae366b89e, IPv4 CIDR: 20.0.0.0/16, Default VPC: No, IPv6 pool: -, Network Address Usage metrics: Disabled, Route 53 Resolver DNS Firewall rule groups: -, Main route table: rtb-0ca29dbbf650ba7a0, and Owner ID: 149142082303.

The screenshot shows the 'Create internet gateway' settings page. A 'Name tag' field contains 'ohio-igw'. Under 'Tags - optional', there is one tag: 'Key: Name, Value: ohio-igw'. A note says 'You can add 49 more tags.' At the bottom are 'Cancel' and 'Create internet gateway' buttons.

## Attach to VPC (igw-0df3f486e22574888) Info

### 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.

X

#### AWS Command Line Interface command

Cancel
Attach internet gateway

### VPC dashboard

[EC2 Global View](#)
Filter by VPC

#### Virtual private cloud

[Your VPCs](#)
[Subnets](#)
[Route tables](#)

#### Internet gateways

[Egress-only internet gateways](#)
[DHCP option sets](#)
[Elastic IPs](#)
[Managed prefix lists](#)
Internet gateway igw-0df3f486e22574888 successfully attached to vpc-08d38ffa9b4745b76

## igw-0df3f486e22574888 / ohio-igw

Actions

### Details Info

Internet gateway ID  
vpc-0df3f486e22574888

State  
Attached

VPC ID  
vpc-08d38ffa9b4745b76 | ohio-vpc

Owner  
149142082303

### Tags

Search tags

Key	Value
Name	ohio-igw

Manage tags

## Create subnet Info

### VPC

#### VPC ID

Create subnets in this VPC.

vpc-08d38ffa9b4745b76 (ohio-vpc)

#### Associated VPC CIDRs

IPv4 CIDRs  
20.0.0.0/16

### Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

#### Subnet 1 of 1

#### Subnet 1 of 1

##### Subnet name

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

ohio-subnet

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.

No preference

##### 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.

20.0.0.0/16

##### IPv4 subnet CIDR block

20.0.0.0/24
256 IPs

aws | Search [Alt+S] | United States (Ohio) ▾ Account ID: 1491-4208-2303 ▾ Itimindtree\_10840047

VPC Subnets

You have successfully created 1 subnet: subnet-03c03e368e9b7fe8d

Subnets (1) Info

Last updated less than a minute ago

Actions Create subnet

Subnet ID : subnet-03c03e368e9b7fe8d

Name: ohio-subnet Subnet ID: subnet-03c03e368e9b7fe8d State: Available VPC: vpc-08d38ffa9b4745b76 | ohio... Block Public: Off

aws | Search [Alt+S] | United States (Ohio) ▾ Account ID: 1491-4208-2303 ▾ Itimindtree\_10840047

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.

ohio-rout

#### VPC

The VPC to use for this route table.

vpc-08d38ffa9b4745b76 (ohio-vpc)

### 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

ohio-rout

Remove

Add new tag

You can add 49 more tags.

aws | Search [Alt+S] | United States (Ohio) ▾ Account ID: 1491-4208-2303 ▾ Itimindtree\_10840047

VPC Route tables rtb-082ccc5fb467267e Edit routes

## Edit routes

### Destination

20.0.0.0/16

### Target

local

### Status

Active

### Propagated

No

### Route Origin

CreateRouteTable

0.0.0.0/0

Internet Gateway

-

No

CreateRoute

Remove

igw-0df3f486e2257488b

Add route

Cancel

Preview

Save changes

AWS | Search [Alt+S] | United States (Ohio) | Account ID: 1491-4208-2303 | Itimindtree\_10840047

VPC > Route tables > rtb-082ccc5fbc467267e > Edit subnet associations

### Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/1)				
Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input checked="" type="checkbox"/> ohio-subnet	subnet-03c03e368e9b7fe8d	20.0.0.0/24	-	Main (rtb-0ca29dbbf650ba7a0)

**Selected subnets**

subnet-03c03e368e9b7fe8d / ohio-subnet X

Cancel Save associations

AWS | Search [Alt+S] | United States (Ohio) | Account ID: 1491-4208-2303 | Itimindtree\_10840047

VPC > Route tables > rtb-082ccc5fbc467267e

### rtb-082ccc5fbc467267e / ohio-rout

**Details** Info

Route table ID rtb-082ccc5fbc467267e	Main <input type="checkbox"/> No	Explicit subnet associations subnet-03c03e368e9b7fe8d / ohio-subnet	Edge associations -
VPC vpc-08d38ffa9b4745b76   ohio-vpc	Owner ID 149142082303		

**Routes** Subnet associations Edge associations Route propagation Tags

**Routes (2)**

Destination	Target	Status	Propagated	Route Origin
0.0.0.0/0	igw-0df3f486e22574888	Active	No	Create Route
20.0.0.0/16	local	Active	No	Create Route Table

In Ohio, I also created an instance with my Ohio vpc and subnet and added ssh and ICMP ipv4 port in its security group.

AWS | Search [Alt+S] | United States (Ohio) | Account ID: 1491-4208-2303 | Itimindtree\_10840047

EC2 > Instances > Launch an instance

### Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

**Name and tags** Info

Name  
Ohio server Add additional tags

**Application and OS Images (Amazon Machine Image)** Info

An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose **Browse more AMIs**.

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

**Summary**

Number of instances 1

Software Image (AMI)  
Amazon Linux 2023 AMI 2023.8.2... [read more](#)

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
New security group

Storage (volumes)

Cancel Launch instance Preview code

EC2 > Instances > Launch an instance

### Network settings Info

VPC - required Info  
vpc-08d38ffa9b4745b76 (ohio-vpc)  
20.0.0.0/16

Subnet Info  
subnet-03c03e368e9b7fe8d  
VPC: vpc-08d38ffa9b4745b76 Owner: 149142082303  
Availability Zone: us-east-2c (use2-a2z) Zone type: Availability Zone  
IP addresses available: 251 CIDR: 20.0.0.0/24

### Summary

Number of instances Info  
1

Software Image (AMI)  
Amazon Linux 2023 AMI 2023.8.2... read more  
ami-0169aa51f6faf20d5

Virtual server type (instance type)  
t2.micro

EC2 > Instances > Launch an instance

### Inbound Security Group Rules

▼ Security group rule 1 (TCP, 22, 0.0.0.0/0)

Type <small>Info</small>	Protocol <small>Info</small>	Port range <small>Info</small>
ssh	TCP	22

Source type Info  
Anywhere

Description - optional Info  
e.g. SSH for admin desktop

▼ Security group rule 2 (ICMP, All)

Type <small>Info</small>	Protocol <small>Info</small>	Port range <small>Info</small>
All ICMP - IPv4	ICMP	All

Source type Info  
Custom

Description - optional Info  
e.g. SSH for admin desktop

### Summary

Number of instances Info  
1

Software Image (AMI)  
Amazon Linux 2023 AMI 2023.8.2... read more  
ami-0169aa51f6faf20d5

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
New security group

Storage (volumes)

Cancel Launch instance

Preview code

EC2 > Instances

Events

▼ Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

### Instances (3) Info

Last updated less than a minute ago ↻ Connect Instance state Actions Launch instances

Name <small>Info</small>	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
Ohio Server	i-0c8377bf0ad0ac0d6	Running <span style="color: green;">⟳</span> <span style="color: blue;">⟳</span>	t2.micro	-	<span style="color: green;">+ View alarms</span>	us-east-2c

After that I created a peering connection and added the N. Virginia's VPC ID.

aws Search [Alt+S] United States (Ohio) Account ID: 1491-4208-2303 Itimindtree\_10840047

EC2 > Peering connections > Create peering connection

### Create peering connection

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them privately. Info

#### Peering connection settings

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

#### Select a local VPC to peer with

VPC ID (Requester)

VPC CIDRs for vpc-08d38ffa9b4745b76 (ohio-vpc)

CIDR	Status	Status reason
20.0.0.0/16	<span style="color: green;">Associated</span>	-

aws | Search [Alt+S] | United States (Ohio) | Account ID: 1491-4208-2303 | Itimindtree\_10840047

VPC > Peering connections > Create peering connection

Select another VPC to peer with

**Account**

- My account
- Another account

**Region**

- This Region (us-east-2)
- Another Region

United States (N. Virginia) (us-east-1)

**VPC ID (Acceptor)**

vpc-0b5ecccc2b02001cc

**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.

**A VPC peering connection pcx-0f49454b03d97a7b7 / ohio-peer has been requested.**  
Remember to change your region to us-east-1 to accept the peering connection.

Then I came back in N. Virginia and accepted the request.

aws | Search [Alt+S] | United States (N. Virginia) | Account ID: 1491-4208-2303 | Itimindtree\_10840047

VPC > Peering connections

**Peering connections (1/1) Info**

Name	Peering connection ID	Status	Requester VPC	Acceptor VPC
-	pcx-0f49454b03d97a7b7	Pending acceptance	vpc-08d38ffa9b4745b76	vpc-0b5ecccc2b0201cc

**Actions**

- View details
- Accept request
- Reject request
- Edit DNS settings
- Manage tags
- Delete peering connection

**Peering connections (1) Info**

Name	Peering connection ID	Status	Requester VPC	Acceptor VPC
-	pcx-0f49454b03d97a7b7	Active	vpc-08d38ffa9b4745b76	vpc-0b5ecccc2b0201cc

Your VPC peering connection (pcx-0f49454b03d97a7b7) has been established.  
To send and receive traffic across this VPC peering connection, you must add a route to the peered VPC in one or more of your VPC route tables.

Modify my route tables now

Then in the route table of both the region I added each other's destination with target peering connection.

Destination	Target	Status	Propagated	Route Origin
10.0.0.0/16	local	Active	No	CreateRouteTable
	Q local	<span style="color: red;">X</span>		
Q 0.0.0.0/0	Internet Gateway	Active	No	CreateRoute
	Q igw-0c99fbddc47454c95	<span style="color: red;">X</span>		
Q 20.0.0.0/16	Peering Connection	-	No	CreateRoute
	Q pcx-0f49454b03d97a7b7	<span style="color: red;">X</span>		

[Add route](#)

[Cancel](#) [Preview](#) [Save changes](#)

Destination	Target	Status	Propagated	Route Origin
20.0.0.0/16	local	Active	No	CreateRouteTable
	Q local	<span style="color: red;">X</span>		
Q 0.0.0.0/0	Internet Gateway	Active	No	CreateRoute
	Q igw-0df3f486e22574888	<span style="color: red;">X</span>		
Q 10.0.0.0/16	Peering Connection	-	No	CreateRoute
	Q pcx-0f49454b03d97a7b7	<span style="color: red;">X</span>		

[Add route](#)

[Cancel](#) [Preview](#) [Save changes](#)

After that, I launched the N. Virginia's instance and copied the private ip of Ohio's instance.

```

root@nv:~ x + v
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\10840047\Downloads> ssh -i "nv-key.pem" ec2-user@100.28.233.15
The authenticity of host '100.28.233.15 (100.28.233.15)' can't be established.
ED25519 key fingerprint is SHA256:wNLCdxwGlC+Hub0nJrLvkh6rnilACF7J+FZKke4jf4w.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '100.28.233.15' (ED25519) to the list of known hosts.

, #_
~\_\_ #####_ Amazon Linux 2023
~~ \_\_#####\
~~ \#\#\#
~~ \#/ ___ https://aws.amazon.com/linux/amazon-linux-2023
~~ \~' '->
~~ / /
~~ / / /
~~ /m' /m'

[ec2-user@ip-10-0-0-41 ~]$ sudo hostnamectl set-hostname nv.server.com
[ec2-user@ip-10-0-0-41 ~]$ sudo su -
[root@nv ~]#

```

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with links like Instance types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, AMI Catalog), Elastic Block Store (Volumes, Snapshots, Lifecycle Manager), and Network & Security (Security Groups, Elastic IPs). The main area displays 'Instances (1/3) Info' for one instance. The instance details are as follows:

- Name: Ohio Server
- Instance ID: i-0c8377bf0ad0ac0d6
- Instance state: Running
- Instance type: t2.micro
- Status check: 2/2 checks passed
- Alarm status: View alarms
- Availability Zone: us-east-2c

Below the instance details, the 'Details' tab is selected in the navigation bar. Under 'Instance summary', it shows the Public IPv4 address (3.15.32.105) and Public DNS (20.0.0.250). A tooltip indicates that the Private IPv4 address has been copied.

When I ran the command **ping <Ohio's server private ip>**, it was working. That means the peering connection has been established.

```
[root@nv ~]# ping 20.0.0.250
PING 20.0.0.250 (20.0.0.250) 56(84) bytes of data.
64 bytes from 20.0.0.250: icmp_seq=1 ttl=127 time=9.62 ms
64 bytes from 20.0.0.250: icmp_seq=2 ttl=127 time=9.66 ms
64 bytes from 20.0.0.250: icmp_seq=3 ttl=127 time=9.57 ms
64 bytes from 20.0.0.250: icmp_seq=4 ttl=127 time=9.77 ms
64 bytes from 20.0.0.250: icmp_seq=5 ttl=127 time=9.70 ms
64 bytes from 20.0.0.250: icmp_seq=6 ttl=127 time=9.64 ms
```

**Create a Custom VPC. Where you need to create two subnets like Private subnet and Public subnet.in the public subnet I want to host my web server. Where my website is running and Private subnet my database is running. Data base should not be reachable publicly.**

At first, I created a vpc, then an internet gateway and attached it to the vpc.

The screenshot shows two consecutive screenshots of the AWS VPC dashboard.

**Screenshot 1: VPC dashboard - Your VPCs**

- Header: AWS, Search, Account ID: 1491-4208-2303, United States (N. Virginia), Itimindtree\_10840047
- Left sidebar: VPC dashboard, EC2 Global View, Filter by VPC, Virtual private cloud (Your VPCs, Subnets, Route tables, Internet gateways, Egress-only internet gateways, Carrier gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections).
- Main content: Your VPCs (1) table with one row: Name (vpc-096ee5d9060f72b59), VPC ID (vpc-096ee5d9060f72b59), State (Available), Block Public Access (Off), IPv4 CIDR (172.31.0.0/16), IPv6 CIDR (-). Actions button and Create VPC button.
- Middle section: Select a VPC above.

**Screenshot 2: VPC details for 'asmit-vpc'**

- Header: AWS, Search, Account ID: 1491-4208-2303, United States (N. Virginia), Itimindtree\_10840047
- Left sidebar: VPC dashboard, EC2 Global View, Filter by VPC, Virtual private cloud (Your VPCs, Subnets, Route tables, Internet gateways, Egress-only internet gateways, Carrier gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections).
- Main content:
  - Success message: You successfully created vpc-072f6dce274051236 / asmit-vpc
  - VPC details card for 'vpc-072f6dce274051236 / asmit-vpc':
 

VPC ID: vpc-072f6dce274051236	State: Available	Block Public Access: Off	DNS hostnames: Disabled
DNS resolution: Enabled	Tenancy: default	DHCP option set: dopt-070f371e9acc3200a	Main route table: rtb-0b84aec61ed9ebbe
Main network ACL: acl-084140fc68ba0a583	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: 149142082303
  - Resource map tab: Shows a map of resources.

## 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
<input type="text" value="Name"/>	<input type="text" value="asmit-igw"/> <span>X</span> <span>Remove</span>

[Add new tag](#)

You can add 49 more tags.

[Cancel](#)
[Create internet gateway](#)

### VPC dashboard

#### EC2 Global View

[Filter by VPC](#)

#### Virtual private cloud

[Your VPCs](#)
[Subnets](#)
[Route tables](#)

#### Internet gateways

[Egress-only internet gateways](#)
[Carrier gateways](#)
[DHCP option sets](#)
[Elastic IPs](#)
[Managed prefix lists](#)
[NAT gateways](#)
[Peering connections](#)

The following internet gateway was created: igw-09f40064f536cda75 - asmit-igw. You can now attach to a VPC to enable the VPC to communicate with the internet.

[Attach to a VPC](#)

### igw-09f40064f536cda75 / asmit-igw

#### Details Info

Internet gateway ID  
[igw-09f40064f536cda75](#)

State  
Detached

VPC ID  
-

Owner  
[149142082303](#)

#### Tags

[Search tags](#)

Key	Value
Name	asmit-igw

[Manage tags](#)

### Internet gateways (1/2) Info

[Find internet gateways by attribute or tag](#)

Name

Internet gateway ID

State

VPC ID

-

[igw-0e7c9787d0b52a21b](#)

Attached

vpc-0

asmit-igw

[igw-09f40064f536cda75](#)

Detached

-



[Actions](#)

[Create internet gateway](#)

[View details](#)

[Attach to VPC](#)

[Detach from VPC](#)

[Manage tags](#)

[Delete internet gateway](#)

1

>



▼

Owner



149142082303

149142082303



## Attach to VPC (igw-09f40064f536cda75) Info

### 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.



▶ AWS Command Line Interface command

Cancel
Attach internet gateway

### VPC dashboard

EC2 Global View

Filter by VPC

#### Virtual private cloud

Your VPCs

Subnets

Route tables

#### Internet gateways

Egress-only internet gateways

Carrier gateways

DHCP option sets

Elastic IPs

Managed prefix lists

NAT gateways

Peering connections

Internet gateway igw-09f40064f536cda75 successfully attached to vpc-072f6dce274051236

## igw-09f40064f536cda75 / asmit-igw

### Details Info

Internet gateway ID  
 igw-09f40064f536cda75

State  
 Attached

VPC ID  
 vpc-072f6dce274051236 | asmit-vpc

Owner  
 149142082303

### Tags

Search tags

Key	Value
Name	asmit-igw

Manage tags

< 1 >

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Then I created two subnets, one is public and another is private.

## Create subnet Info

### VPC

#### VPC ID

Create subnets in this VPC.



#### 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

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Screenshot of the AWS VPC Subnets creation page. The subnet is named "private-asmit". It is in the "No preference" availability zone and has an IPv4 CIDR block of "10.0.0.0/16". The IPv4 subnet CIDR block is "10.0.1.0/24", which provides 256 IPs.

**Subnet 1 of 1**

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

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.

**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.

**IPv4 subnet CIDR block**  
 256 IPs  
[<](#) [>](#) [^](#) [v](#)

**Tags - optional**

Key	Value - optional

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Screenshot of the AWS VPC Subnets list page. A success message states "You have successfully created 1 subnet: subnet-0c068d86dd85dabd9". The list shows two subnets: "public-asmit" and "private-asmit", both of which are available and associated with the VPC "vpc-072f6dce274051236".

**VPC dashboard** [Actions](#) [Create subnet](#)

**Subnets (8) Info**

Name	Subnet ID	State	VPC	Block Public...
public-asmit	subnet-02bc21f53585a3539	Available	vpc-072f6dce274051236   asmi...	Off
private-asmit	subnet-0c068d86dd85dabd9	Available	vpc-072f6dce274051236   asmi...	Off

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Then I created a route table and added the target internet gateway to it. Also I added subnet association with public subnet in the route table.

Screenshot of the AWS Route Tables creation page. The route table is named "public-rout-asmit". It is associated with the VPC "vpc-072f6dce274051236".

**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.

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

**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
<input type="text" value="Name"/>	<input type="text" value="public-rout-asmit"/> <a href="#">X</a> <a href="#">Remove</a>

[Add new tag](#)  
You can add 49 more tags.

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AWS VPC Route Tables

**Route table rtb-0a8ae4d1657d1bb11 | public-rout-asmit was created successfully.**

**rtb-0a8ae4d1657d1bb11 / public-rout-asmit**

**Details** [Info](#)

<b>Route table ID</b> rtb-0a8ae4d1657d1bb11	<b>Main</b> <input checked="" type="checkbox"/> No	<b>Explicit subnet associations</b> -	<b>Edge associations</b> -
<b>VPC</b> vpc-072f6dce274051236   asmit-vpc	<b>Owner ID</b> 149142082303		

**Routes** [Subnet associations](#) [Edge associations](#) [Route propagation](#) [Tags](#)

**Routes (1)**

Destination	Target	Status	Propagated	Route Origin
10.0.0.0/16	local	Active	No	Create Route Table

[Edit routes](#)

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**Edit routes**

**Destination** **Target** **Status** **Propagated** **Route Origin**

10.0.0.0/16	local	Active	No	CreateRouteTable
0.0.0.0/0	Internet Gateway	-	No	CreateRoute

[Add route](#) [Remove](#)

[Cancel](#) [Preview](#) [Save changes](#)

**Edit subnet associations**

Change which subnets are associated with this route table.

**Available subnets (1/2)**

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
public-asmit	subnet-02bc21f53585a3539	10.0.0.0/24	-	Main (rtb-0b84aec61ed9ebbb)
private-asmit	subnet-0c068d86dd85dabd9	10.0.1.0/24	-	Main (rtb-0b84aec61ed9ebbb)

**Selected subnets**

subnet-02bc21f53585a3539 / public-asmit [X](#)

[Cancel](#) [Save associations](#)

After that, I launched an instance **Web Server** using my custom vpc and public subnet with port ssh and ICMP ipv4 in the security group

This screenshot shows the initial steps of launching an EC2 instance. It includes fields for 'Name and tags', 'Application and OS Images (Amazon Machine Image)', and a summary section with a 'Launch instance' button.

**Name and tags**  
Name: Web Server

**Application and OS Images (Amazon Machine Image)**  
Search bar: Search our full catalog including 1000s of application and OS images  
Recent AMIs: CloudShell, Feedback

**Summary**  
Number of instances: 1

**Software Image (AMI)**  
Amazon Linux 2023 AMI 2023.8.2...  
ami-0de716d6197524dd9

**Virtual server type (instance type)**  
t3.micro

**Firewall (security group)**  
New security group

**Storage (volumes)**  
Add volume

**Buttons**  
Cancel, Launch instance, Preview code

This screenshot shows the 'Network settings' configuration step. It includes fields for VPC, Subnet, and a summary section with a 'Launch instance' button.

**Network settings**  
VPC - required: **vpc-07f6dce274051236 (asmmit-vpc)**  
Subnet: **subnet-02bc21f53585a3539**  
Description: public-asmit

**Summary**  
Number of instances: 1

**Software Image (AMI)**  
Amazon Linux 2023 AMI 2023.8.2...  
ami-0de716d6197524dd9

**Virtual server type (instance type)**  
t2.micro

**Firewall (security group)**

This screenshot shows the 'Security group' configuration step. It lists two rules: one for SSH (TCP, 22) and one for ICMP (All, All). The summary section includes a 'Launch instance' button.

**Security group rule 1 (TCP, 22, 0.0.0.0/0)**  
Type: ssh, Protocol: TCP, Port range: 22  
Source type: Anywhere, Source: 0.0.0.0/0

**Security group rule 2 (ICMP, All, 0.0.0.0/0)**  
Type: All ICMP - IPv4, Protocol: ICMP, Port range: All  
Source type: Custom, Source: 0.0.0.0/0

**Summary**  
Number of instances: 1

**Software Image (AMI)**  
Amazon Linux 2023 AMI 2023.8.2...  
ami-0de716d6197524dd9

**Virtual server type (instance type)**  
t2.micro

**Firewall (security group)**  
New security group

**Storage (volumes)**  
Add volume

**Buttons**  
Cancel, Launch instance, Preview code

I launched another instance **Database Server** with the custom vpc and private subnet with port ssh and ICMP ipv4 in the security group.

The screenshot shows the AWS EC2 'Launch an instance' wizard. At the top, it says 'Launch an instance' and provides instructions: 'Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.' In the 'Name and tags' section, the name is set to 'DB Server'. In the 'Application and OS Images (Amazon Machine Image)' section, a search bar is shown, followed by a 'Quick Start' tab which is selected. In the 'Summary' section, the number of instances is set to 1, the software image (AMI) is 'Amazon Linux 2023 AMI 2023.8.2...', the virtual server type is 't2.micro', and the storage volume is 'standard'. A large orange 'Launch instance' button is at the bottom right. The bottom of the screen shows standard AWS navigation links like CloudShell, Feedback, and copyright information.

The screenshot shows the 'Network settings' configuration page. It starts with a 'VPC - required' dropdown containing 'vpc-072f6dce274051236 (asmit-vpc) 10.0.0.0/16'. Below it is a 'Subnet' dropdown containing 'subnet-0c068d86dd85dabd9 private-asmit'. The details for this subnet are shown: VPC: vpc-072f6dce274051236, Owner: 149142082303, Availability Zone: us-east-1a (use1-az2), Zone type: Availability Zone, IP addresses available: 251, CIDR: 10.0.1.0/24. To the right, there is a 'Create new subnet' link with a plus icon.

**Inbound Security Group Rules**

- ▼ Security group rule 1 (TCP, 22, 0.0.0.0/0)
 

[Remove](#)

<b>Type</b>   <a href="#">Info</a>	<b>Protocol</b>   <a href="#">Info</a>	<b>Port range</b>   <a href="#">Info</a>
ssh	TCP	22
<b>Source type</b>   <a href="#">Info</a>	<b>Source</b>   <a href="#">Info</a>	<b>Description - optional</b>   <a href="#">Info</a>
Anywhere	Add CIDR, prefix list or security group 0.0.0.0/0 <a href="#">X</a>	e.g. SSH for admin desktop
- ▼ Security group rule 2 (ICMP, All, 0.0.0.0/0)
 

[Remove](#)

<b>Type</b>   <a href="#">Info</a>	<b>Protocol</b>   <a href="#">Info</a>	<b>Port range</b>   <a href="#">Info</a>
All ICMP - IPv4	ICMP	All
<b>Source type</b>   <a href="#">Info</a>	<b>Source</b>   <a href="#">Info</a>	<b>Description - optional</b>   <a href="#">Info</a>
Custom	Add CIDR, prefix list or security group 0.0.0.0/0 <a href="#">X</a>	e.g. SSH for admin desktop

**aws** | [Search](#) [Alt+S] United States (N. Virginia) ▾ Account ID: 1491-4208-2303 ▾ Itimindtree\_10840047

[Instances](#) EC2 > Instances

**EC2**

- Dashboard
- EC2 Global View
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  - Instances
  - Instance Types
  - Launch Templates
  - Spot Requests
  - Savings Plans
  - Reserved Instances
  - Dedicated Hosts
  - Capacity Reservations
- Images
  - AMIs
  - AMI Catalog

**Instances (4) [Info](#)** Last updated less than a minute ago

<input type="checkbox"/>	Name <a href="#">D</a>	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input type="checkbox"/>	DB Server	i-09a1ddcd926291daf	<span>Running</span> <a href="#">Q</a> <a href="#">Q</a>	t2.micro	<span>2/2 checks passed</span> <a href="#">View alarms +</a>	us-east-1a	
<input type="checkbox"/>	Web Server	i-028b885c4576177f9	<span>Running</span> <a href="#">Q</a> <a href="#">Q</a>	t2.micro	<span>2/2 checks passed</span> <a href="#">View alarms +</a>	us-east-1a	

Select an instance

Then I launched the web server in the terminal.

```

root@web:~ x + 
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

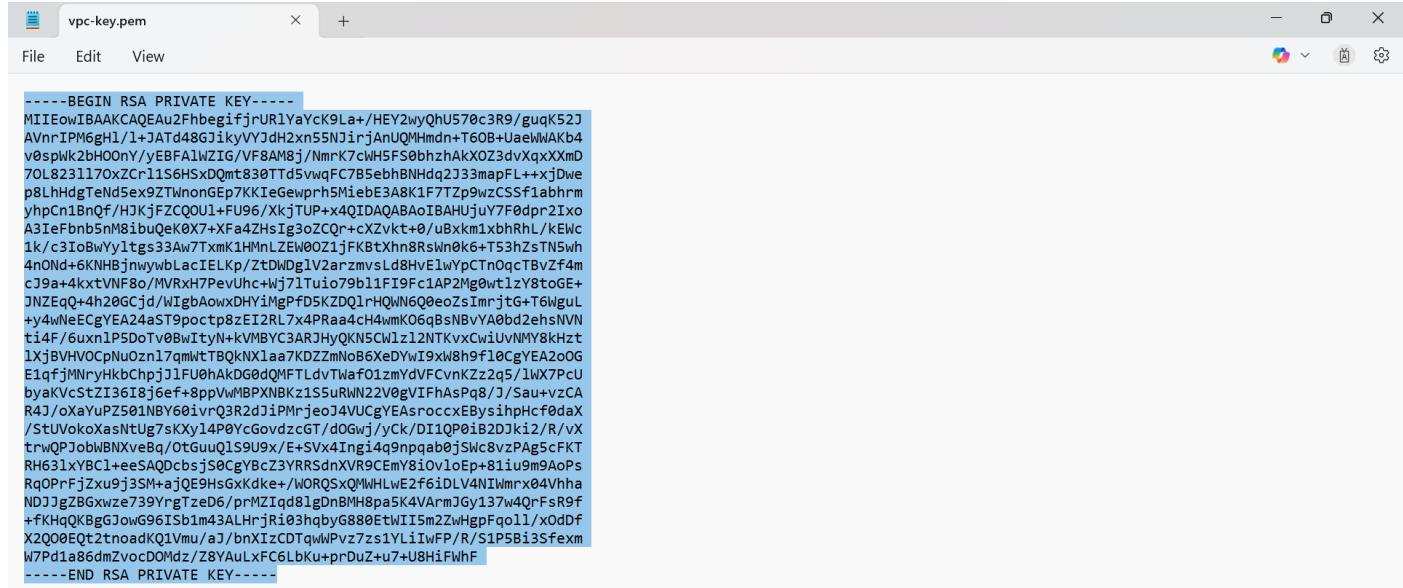
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\10840047\Downloads> ssh -i "vpc-key.pem" ec2-user@44.218.21.214
The authenticity of host '44.218.21.214 (44.218.21.214)' can't be established.
ED25519 key fingerprint is SHA256:troiQBkjicMIMmznJ8Vo6z70dBizxiz9Lqa228mn+0g.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '44.218.21.214' (ED25519) to the list of known hosts.

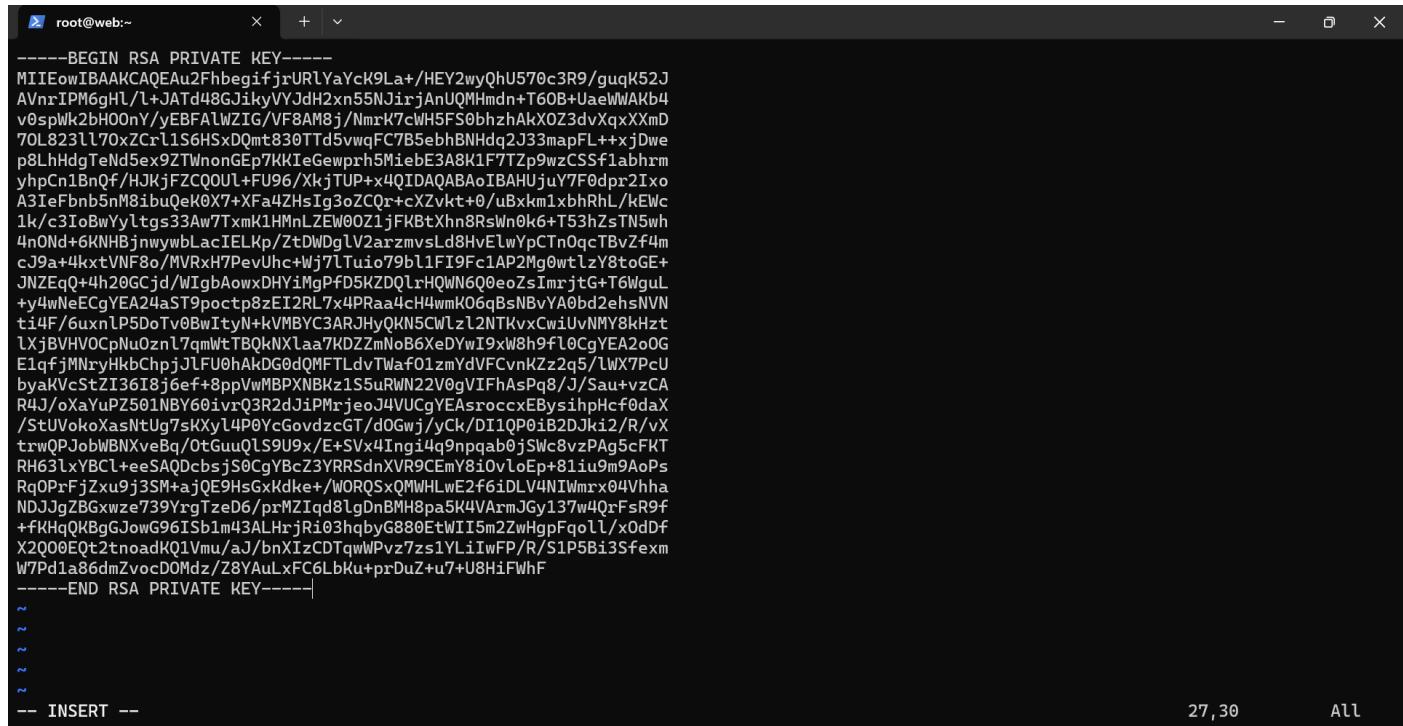
#_
~~\_\_ ##### Amazon Linux 2023
~~\_\_ #####\
~~ \###| https://aws.amazon.com/linux/amazon-linux-2023
~~ \#/ __|__>
~~~ \~' / \
~~~ ._. / \
~~~ ._. / \
~~~ ._. / \
~~~ ._. / \
[ec2-user@ip-10-0-0-122 ~]$ sudo hostnamectl set-hostname web.server.com
[ec2-user@ip-10-0-0-122 ~]$ sudo su -
[root@web ~]#

```

Then I copied the RSA Private key and pasted it in the vim vpc-key.pem (key pair name) and ran the command `chmod 400` to manage the permissions.



```
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEAu2FhbegifjzURlYaYcK9La+/HEY2wyQhU570c3R9/guqk523
AVnrIPM6gH1/l+JATd48GJikyVYJRH2xn55NjirjAnUQMhmdn+T6OB+UaeWAKb4
v0spwk2bHOOnY/yEBFA1wZIG/VF8AM8j/Nmrk7cWh5FSobhzhAkXOZ3dvXqxXXmD
70L8231170xZCr11S6HSxDQmt830TdT5vwqFC7B5ebhBNHdq2J33mapFL++xJdwe
p8LhhdgTeNd5ex92TwnonGeP7KKIeGewprh5MiebE3A8K1F7TzP9wzCSSf1abhrm
yhpCn18nQf/HJKjFZCQ0U1+FU96/XkjTUP+x4QIDAQABAOIBAHUjuY7F0dpr2Ix0
A3Iefbnb5nM8ib0ek0X7+XFa4ZhsIg3oZCqr+cXZvkt+0/uBxkm1xbhRhl/kEwC
1k/c3IoBwY1tgs33Aw7txmK1HMnLZEw00Z1jFKBtXhn8rsln0k6-T53hzsTN5wh
4n0Nd+6KNHbJnwvblacIELkp/ZtDWdg1v2arzmvsLd8hvElwYpCTn0qcTBzF4m
cJ9a+4kxtVNF8o/MVRxH7Pevhc+Wj7lTuio79b1lFI9Fc1AP2Mg0wtlzy8toGE+
JNZEQ+4h20GJcd/WIgbAoxwDHYiMgPfd5KZDQlrHQWN6Q0eoZsImrjtG+T6wgul
+y4wNeEcgyEA24asT9p0ctp8zE12RL7x4Praa4ch4wmk06qBsNbVVA0bd2ehsNVN
ti4F/6uxnlP5DoTv0BwItyn+kVMBYC3ARJHyQKN5Cwlz12NTKvxCwiUvNMY8khzt
1xjBVHVOcpNuOzn17qmwtTBQkhNxlaa7KDZmmNoB6XeDywI9xw8h9f10cgYEAz0OG
E1qfjMNryHkbChpjJlFUohAkDG0dQMFTLdvTwaf01zmYdVFcvnKZz2q5/lwX7pcU
byaKvcStZ3618j6ef+8ppvMbpXNBkz155uRN220vgVIFhAsPg8/J/Sau+vzCA
R4J/oXaYuPZ501NBY60ivrQ3R2dJiPMrjeoJ4VUcgyEAsroccxEBysihpHcf0daX
/StUvokoxasNtUg7sKxy14p0YcGovdzGt/d0Gwj/yck/DI1Q0p0iB2Djk12/R/vX
trwOPJobwBNXveBq/OtGuuQ1S9U9x/E+Svx4Ingi4q9npqab0jSwc8vzPAg5cFKT
RH631xYBcl+eeSAQDcbssjSOcgYbcZ3YRRSdnXVR9CEmY8i0vloEp+81iu9m9AoPs
RqOPrfjZxu9j3SM+ajQF9HsGxKdke+/WORQsXQmWHLwE2f6DLV4NIWmxr04Vhha
NDJJgZB8gxze739YrgTzeD6/prMZIqd8lgDnBMH8pa5K4VArMjGy137w4QrFsR9f
+fKHqQkBgGJowG96ISb1m43ALhzjRi03hqbyG880EtWI5m2zwHgpFqo1l/x0dDf
X2Q00Eqt2tnoadKQ1Vmua/J/bnXIZCDTqwWPvz7zs1YLiiwFP/R/S1P5Bi3Sfexm
W7Pd1a86dmZvocDOMdz/28YaulxFC6Lbku+prDuZ+u7+U8HiFWhf
-----END RSA PRIVATE KEY-----
```



```
-----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEAu2FhbegifjzURlYaYcK9La+/HEY2wyQhU570c3R9/guqk523
AVnrIPM6gH1/l+JATd48GJikyVYJRH2xn55NjirjAnUQMhmdn+T6OB+UaeWAKb4
v0spwk2bHOOnY/yEBFA1wZIG/VF8AM8j/Nmrk7cWh5FSobhzhAkXOZ3dvXqxXXmD
70L8231170xZCr11S6HSxDQmt830TdT5vwqFC7B5ebhBNHdq2J33mapFL++xJdwe
p8LhhdgTeNd5ex92TwnonGeP7KKIeGewprh5MiebE3A8K1F7TzP9wzCSSf1abhrm
yhpCn1BnQf/HJKjFZCQ0U1+FU96/XkjTUP+x4QIDAQABAOIBAHUjuY7F0dpr2Ix0
A3Iefbnb5nM8ib0ek0X7+XFa4ZhsIg3oZCqr+cXZvkt+0/uBxkm1xbhRhl/kEwC
1k/c3IoBwY1tgs33Aw7txmK1HMnLZEw00Z1jFKBtXhn8rsln0k6-T53hzsTN5wh
4n0Nd+6KNHbJnwvblacIELkp/ZtDWdg1v2arzmvsLd8hvElwYpCTn0qcTBzF4m
cJ9a+4kxtVNF8o/MVRxH7Pevhc+Wj7lTuio79b1lFI9Fc1AP2Mg0wtlzy8toGE+
JNZEQ+4h20GJcd/WIgbAoxwDHYiMgPfd5KZDQlrHQWN6Q0eoZsImrjtG+T6wgul
+y4wNeEcgyEA24asT9p0ctp8zE12RL7x4Praa4ch4wmk06qBsNbVVA0bd2ehsNVN
ti4F/6uxnlP5DoTv0BwItyn+kVMBYC3ARJHyQKN5Cwlz12NTKvxCwiUvNMY8khzt
1xjBVHVOcpNuOzn17qmwtTBQkhNxlaa7KDZmmNoB6XeDywI9xw8h9f10cgYEAz0OG
E1qfjMNryHkbChpjJlFUohAkDG0dQMFTLdvTwaf01zmYdVFcvnKZz2q5/lwX7pcU
byaKvcStZ3618j6ef+8ppvMbpXNBkz155uRN220vgVIFhAsPg8/J/Sau+vzCA
R4J/oXaYuPZ501NBY60ivrQ3R2dJiPMrjeoJ4VUcgyEAsroccxEBysihpHcf0daX
/StUvokoxasNtUg7sKxy14p0YcGovdzGt/d0Gwj/yck/DI1Q0p0iB2Djk12/R/vX
trwOPJobwBNXveBq/OtGuuQ1S9U9x/E+Svx4Ingi4q9npqab0jSwc8vzPAg5cFKT
RH631xYBcl+eeSAQDcbssjSOcgYbcZ3YRRSdnXVR9CEmY8i0vloEp+81iu9m9AoPs
RqOPrfjZxu9j3SM+ajQF9HsGxKdke+/WORQsXQmWHLwE2f6DLV4NIWmxr04Vhha
NDJJgZB8gxze739YrgTzeD6/prMZIqd8lgDnBMH8pa5K4VArMjGy137w4QrFsR9f
+fKHqQkBgGJowG96ISb1m43ALhzjRi03hqbyG880EtWI5m2zwHgpFqo1l/x0dDf
X2Q00Eqt2tnoadKQ1Vmua/J/bnXIZCDTqwWPvz7zs1YLiiwFP/R/S1P5Bi3Sfexm
W7Pd1a86dmZvocDOMdz/28YaulxFC6Lbku+prDuZ+u7+U8HiFWhf
-----END RSA PRIVATE KEY-----
```

-- INSERT --

27, 30

All

Then I connected the database server inside my web server, and then I tried running command ping google.com to check if the internet was working in the database server or not and as we can see it's not working.

Hence, the Database is not reachable publicly.

```
ec2-user@ip-10-0-1-251:~      X  +  ▾
[ec2-user@ip-10-0-1-251:~]# vim vpc-key.pem
[ec2-user@ip-10-0-1-251:~]#
[ec2-user@ip-10-0-1-251:~]# chmod 400 vpc-key.pem
[ec2-user@ip-10-0-1-251:~]# ssh -i "vpc-key.pem" ec2-user@10.0.1.251
The authenticity of host '10.0.1.251 (10.0.1.251)' can't be established.
ED25519 key fingerprint is SHA256:6gq7nTeTrlSzIaysjHVJZ3yu0ezBBnQD/5Y8d4ozFc.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.0.1.251' (ED25519) to the list of known hosts.

          _#
  ~\_\_ #####_      Amazon Linux 2023
  ~~ \_\_#####\_
  ~~   \###|_
  ~~     \#/  ___ https://aws.amazon.com/linux/amazon-linux-2023
  ~~     \~'  '-->
  ~~~   /_
  ~~ .-. /_/
  _/m'_

[ec2-user@ip-10-0-1-251 ~]$ ping google.com
PING google.com (142.251.16.102) 56(84) bytes of data.
^C
--- google.com ping statistics ---
35 packets transmitted, 0 received, 100% packet loss, time 35396ms

[ec2-user@ip-10-0-1-251 ~]$ |
```