

AWS Task-4

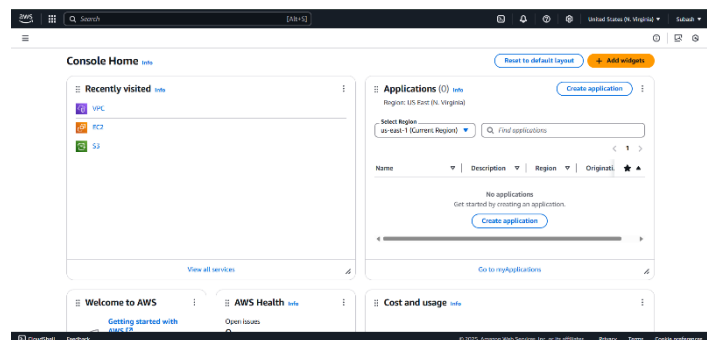
TASKS

1. Launch an EC2 instance (Linux and Windows) along with a web server. Then, create an EBS volume of 5 GB, attach it to an EC2 machine (Linux and Windows), and take a snapshot. Finally, create an EBS volume using the taken snapshot.

PART 1: Launching a Linux EC2 Instance

Step 1: Sign in to the AWS Console

- Go to: https://console.aws.amazon.com
- Input your login details to get into the AWS Management Console.

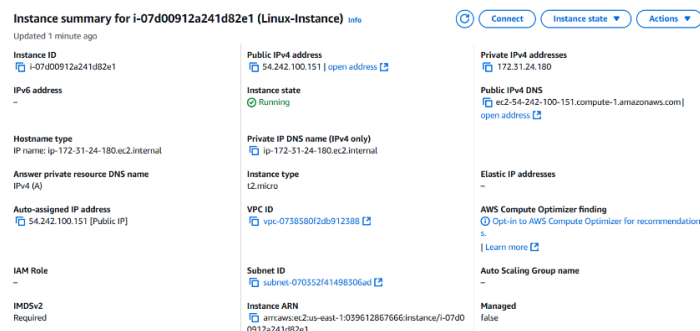


Step 2: Head over to the EC2 Dashboard

- In the AWS search bar, just type EC2 and pick EC2 from the list of services.

Step 3: Launch a Linux Instance

- Start by clicking on Launch Instance.
- Give your instance a name: **Linux-Instance**.
- For the Amazon Machine Image (AMI), pick Amazon Linux 2 (it's free tier eligible!).
- Next, choose your Instance Type: go with **t2.micro**.
- In the Key Pair section, either select an existing key pair or create a new one for SSH access later.
- Now, let's set up the Network Settings:
 - Make sure to allow **SSH (port 22)**
 - Also, allow **HTTP (port 80)** so that your web server can be accessed.
- For now, you can keep the storage settings as they are by default.
- Finally, click Launch Instance and hang tight until it's up and running!



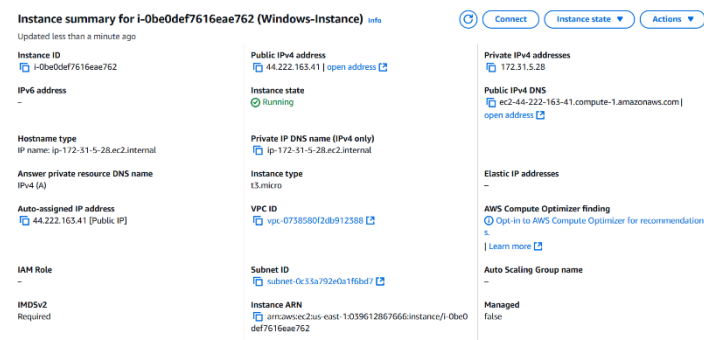
PART 2: Launching a Windows EC2 Instance

Step 1: Head back to the EC2 Dashboard

- Click on Launch Instance once more.

Step 2: Set Up Your Windows Instance

- Give your instance a name: **Windows-Instance**.
- AMI: Pick the Microsoft Windows Server 2019 Base.
- Instance type: **t2.micro**.
- Key pair: Either select an existing one or create a new one (this is for RDP access).
- Network Settings:
 - Enable **RDP (port 3389)**
 - Enable **HTTP (port 80)**
- Hit Launch Instance and hang tight until the status shows it's running.



PART 3: Setting Up the Web Server on Both Instances

Step 1: Linux: Installing Apache Web Server

- Start by selecting the Linux instance → Click on Connect → Use your SSH client.
- Open your terminal and type in, the command is:
ssh -i your-key.pem ec2-user@<Public-IP>
- After you're connected, it's time to install Apache, the command is:
sudo yum update -y
sudo yum install httpd -y
sudo systemctl start httpd
sudo systemctl enable httpd
- Let's create a simple test web page, the command is:
echo "<h1>Hello from Linux EC2 Web Server</h1>" | sudo etc /var/www/html/index.html
- Now, open your browser and navigate to the public IP of your Linux instance. You should see the message displayed there.

```

Complete!
[ec2-user@ip-172-31-24-180 ~]$ sudo systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[ec2-user@ip-172-31-24-180 ~]$ sudo systemctl start httpd
[ec2-user@ip-172-31-24-180 ~]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Sun 2025-04-13 16:57:10 UTC; 16s ago
     Docs: man:httpd.service(8)
   Main PID: 26572 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec: 0 B/sec"
    Tasks: 177 (limit: 1111)
   Memory: 13.0M
      CPU: 6ms
   OGroup: /system.slice/httpd.service
          └─26572 /usr/sbin/httpd -DFOREGROUND
            └─26591 /usr/sbin/httpd -DFOREGROUND
              └─26592 /usr/sbin/httpd -DFOREGROUND
                └─26593 /usr/sbin/httpd -DFOREGROUND
                  └─26594 /usr/sbin/httpd -DFOREGROUND

Apr 13 16:57:09 ip-172-31-24-180.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Apr 13 16:57:10 ip-172-31-24-180.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Apr 13 16:57:10 ip-172-31-24-180.ec2.internal httpd[26572]: Server configured, listening on: port 80

```

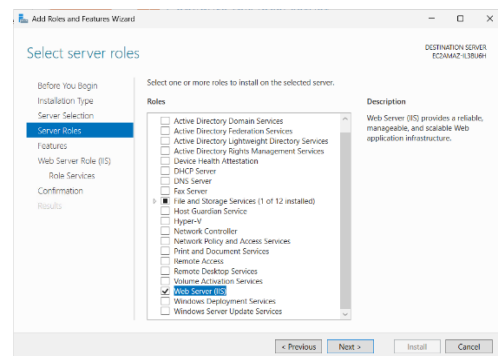
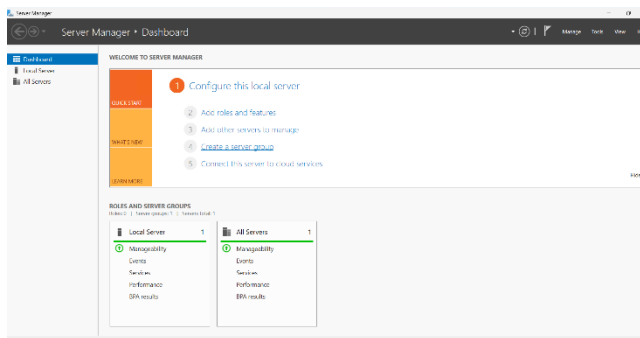
Step 2: Windows: Install IIS Web Server

Ready to set up the IIS Web Server on your Windows instance? Just follow these simple steps:

- Start by selecting your Windows instance, then click on Connect and download the Remote Desktop File.
- Open that file and log in using your credentials (the default user is Administrator).
- Once you're logged in:
 - Launch Server Manager –
 - Navigate to Manage > Add Roles and Features
 - Find Server Roles and check the box for Web Server (IIS).
 - Click Next and then hit Install.
- After the installation is complete, open Internet Explorer on your instance and head over to:

http://localhost

- You should be greeted by the IIS welcome page. To check it out from outside, just enter the instance's public IP in your own browser.



PART 4: Create and Attach EBS Volume Step

Step 1: Create EBS Volume

- Head over to the EC2 dashboard and find Elastic Block Store, then click on Volumes.
- Hit the Create Volume button.
- Configure the following settings: - Size: 5 GiB - Availability Zone: Ensure it matches the zone of your instance (for example, us-east-1a).
- Click on Create Volume to finish up.

vol-036b32a96e0ce317e (Linux-EBS-Instance)

Last updated less than a minute ago

Actions

Delete

Modify

Details

Volume ID

vol-036b32a96e0ce317e (Linux-EBS-Instance)

Size

5 GiB

Type

gp3

Status check

Ok

Okay

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations.

Learn more

Volume state

Available

IOPS

3000

Throughput

125

Fast snapshot restored

No

Availability Zone

us-east-1c

Created

Sun Apr 13 2025 22:46:05 GMT+0530 (India Standard Time)

Multi-Attach enabled

No

Attached resources

-

Outposts ARN

-

Managed

false

Operator

-

Source

Snapshot ID

-

Encryption

Not encrypted

KMS key ID

-

KMS key alias

-

KMS key ARN

-

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vol-0efc9ec1c1e7625a3 (Windows-EBS-Instance)

Last updated less than a minute ago

Actions

Delete

Modify

Details

Volume ID

vol-0efc9ec1c1e7625a3 (Windows-EBS-Instance)

Size

5 GiB

Type

gp3

Status check

Ok

Okay

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations.

Learn more

Volume state

Available

IOPS

3000

Throughput

125

Fast snapshot restored

No

Availability Zone

us-east-1a

Created

Sun Apr 13 2025 22:51:18 GMT+0530 (India Standard Time)

Multi-Attach enabled

No

Attached resources

-

Outposts ARN

-

Managed

false

Operator

-

Source

Snapshot ID

-

Encryption

Not encrypted

KMS key ID

-

KMS key alias

-

KMS key ARN

-

Step 2: Attach EBS Volume to Linux Instance

- Navigate back to the Volumes section.
- Select the 5 GB volume, then click on Actions and choose Attach Volume.
- Pick your Linux instance from the list and hit Attach to connect it.

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-036b32a96e0ce317e (Linux-EBS-Instance)

Availability Zone

us-east-1c

Instance

i-77d909712a2d1483a1

Linux Amazon Linux3

Device name

/dev/sdb

Never Linux kernels may rename your devices to /dev/xvdf through /dev/xvdp internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel

Attach volume

Step 3: Attaching an EBS Volume to Your Windows Instance

- If you want, you can detach it from the Linux instance first, then head back to the Volumes section.
- Click on Actions > Attach Volume, and this time, choose the Windows instance you want to connect it to.

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-0efc9ec1c1e7625a3 (Windows-EBS-Instance)

Availability Zone

us-east-1a

Instance

i-0b0c5d07f616a00a762

Windows Amazon Linux3

Device name

xvdf

Cancel

Attach volume

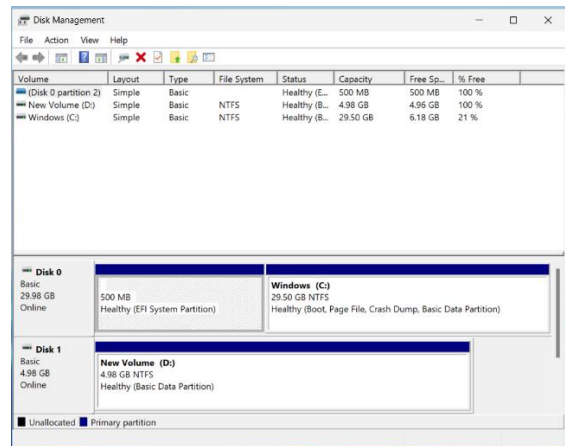
Step 2: Check The volume is added in Instance or Not

- To check the volume in Linux, The command is:
 - **lsblk**
- To check the volume in windows, go to disk management their you can find an disk partiation.

```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

Last login: Sun Apr 13 16:55:50 2025 from 18.206.107.27
[ec2-user@ip-172-31-24-180 ~]$ 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
```

i-07d00912a241d82e1 (Linux-Instance)
PublicIPs: 54.242.100.151 PrivateIPs: 172.31.24.180



PART 5: Taking a Snapshot of Your EBS Volume

- Head over to the EC2 Dashboard and click on Volumes.
- Find and select your 5 GB volume.
- Hit Actions and then choose Create Snapshot.
- Give it a name: my-eks-snapshot, and add a description.
- Click on Create Snapshot and hang tight until it's done.

snap-055fefeb5952ec95 (Linux-snapshot)

Details

Snapshot ID
snap-055fefeb5952ec95 (Linux-snapshot)

Owner
039612867666

Description
Linux-snapshot

▼ Source volume

Volume ID
vol-036b32a96e0ce317e

Volume size
5 GiB

▼ Encryption

Encryption
Not encrypted

KMS key ID
-

KMS key alias
-

KMS key ARN
-

Full snapshot size
0 B

Started
Sun Apr 13 2025 23:16:23 GMT+0530 (India Standard Time)

Progress
100%

Product codes
-

Snapshot status
Completed

Fast snapshot restore
-

snap-01f5afe441be51c37 (Windows-snapshot)

Details

Snapshot ID
snap-01f5afe441be51c37 (Windows-snapshot)

Owner
039612867666

Description
Windows-snapshot

▼ Source volume

Volume ID
vol-0efc9ec1c1e7625a3

Volume size
5 GiB

▼ Encryption

Encryption
Not encrypted

KMS key ID
-

KMS key alias
-

KMS key ARN
-

Full snapshot size
20.5 MiB

Started
Sun Apr 13 2025 23:15:52 GMT+0530 (India Standard Time)

Progress
100%

Product codes
-

Snapshot status
Completed

Fast snapshot restore
-

PART 6: Creating a New Volume from Your Snapshot

- Navigate to Snapshots in the EC2 Dashboard.
- Select your snapshot, then go to Actions and click Create Volume.
- Configure the following:
 - Size: You can stick with the default or increase it if you need more space.
 - Availability Zone: Make sure it matches the instance you plan to use it with.
- Click Create Volume.

vol-0477d9c2a10efdbe9 (W-V-snapshot)

Last updated less than a minute ago

ActionsDeleteModify

Details

Volume ID vol-0477d9c2a10efdbe9 (W-V-snapshot)	Size 5 GiB	Type gp3	Status check Okay
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more	Volume state Available	IOPS 3000	Throughput 125
Fast snapshot restored No	Availability Zone us-east-1a	Created Sun Apr 13 2025 23:22:13 GMT+05:30 (India Standard Time)	Multi-Attach enabled No
Attached resources -	Outposts ARN -	Managed false	Operator -

Source

Snapshot ID
snap-01f5afe441be51c37

Encryption

Encryption Not encrypted	KMS key ID -	KMS key alias -	KMS key ARN -
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vol-0cc842614a2d69462 (L-V-snapshot)

Last updated less than a minute ago

ActionsDeleteModify

Details

Volume ID vol-0cc842614a2d69462 (L-V-snapshot)	Size 5 GiB	Type gp3	Status check Okay
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more	Volume state Available	IOPS 3000	Throughput 125
Fast snapshot restored No	Availability Zone us-east-1c	Created Sun Apr 13 2025 23:21:52 GMT+05:30 (India Standard Time)	Multi-Attach enabled No
Attached resources -	Outposts ARN -	Managed false	Operator -

Source

Snapshot ID
snap-055fefe4bb5952ec95

Encryption

Encryption Not encrypted	KMS key ID -	KMS key alias -	KMS key ARN -
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Once your new volume is ready, you can attach it to any EC2 instance just like before and mount or format it as necessary.

***** **TASK COMPLETED** *****