

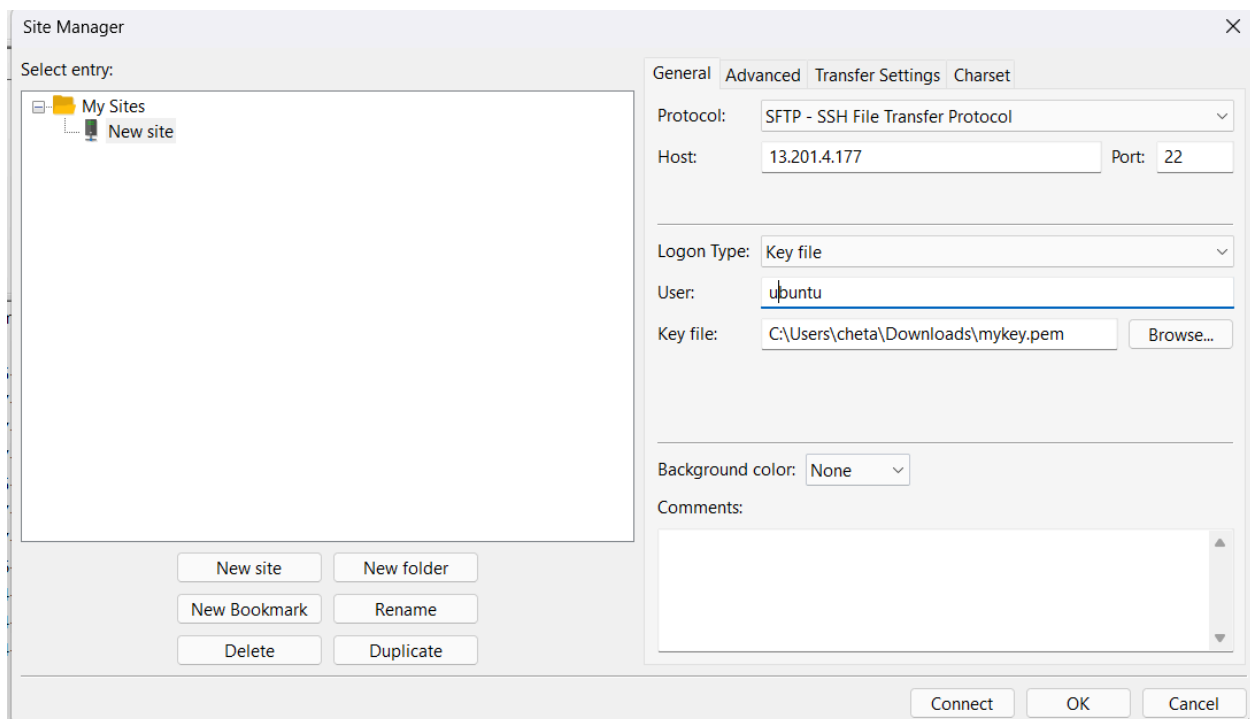
1. Custom AMI Creation

Step-by-Step:

1. Launch Ubuntu EC2 Instance

- Choose Ubuntu 22.04 LTS
- Use existing or new key pair
- Allow ports 22 (SSH), 80 (HTTP) in security group

2. Install Web Server



```
ubuntu@ip-172-31-3-128:~$ sudo apt-get update -y
```

```
ubuntu@ip-172-31-3-128:~$ sudo apt-get install apache2
```

```
ubuntu@ip-172-31-3-128:~$ sudo apt-get install unzip
```

```
ubuntu@ip-172-31-3-128:~$ sudo systemctl enable apache2
```

```
ubuntu@ip-172-31-3-128:~$ sudo systemctl restart apache2
```

```
ubuntu@ip-172-31-3-128:~$ sudo systemctl status apache2
```

```
ubuntu@ip-172-31-3-128:~$ sudo systemctl restart apache2
ubuntu@ip-172-31-3-128:~$ unzip chef-website-template.zip
```

```
ubuntu@ip-172-31-3-128:~$ ls
chef-website-template  chef-website-template.zip
ubuntu@ip-172-31-3-128:~$ ls -la
total 828
drwxr-x--- 5 ubuntu ubuntu 4096 Jul 17 13:08 .
drwxr-xr-x 3 root root 4096 Jul 17 12:36 ..
-rw-r--r-- 1 ubuntu ubuntu 220 Mar 31 2024 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Mar 31 2024 .bashrc
drwx----- 2 ubuntu ubuntu 4096 Jul 17 12:39 .cache
-rw-r--r-- 1 ubuntu ubuntu 807 Mar 31 2024 .profile
drwx----- 2 ubuntu ubuntu 4096 Jul 17 12:36 .ssh
-rw-r--r-- 1 ubuntu ubuntu 0 Jul 17 12:39 .sudo_as_admin_successful
drwxrwxr-x 7 ubuntu ubuntu 4096 Jul 17 13:08 chef-website-template
-rw-rw-r-- 1 ubuntu ubuntu 814760 Jul 17 12:59 chef-website-template.zip
```

```
ubuntu@ip-172-31-3-128:~$ sudo cp -r chef-website-template/* /var/www/html
```

Instances (1/1) Info Last updated less than a minute ago Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive) All states

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input checked="" type="checkbox"/>	ubuntu-instance	i-0febe10c1037b9262	Running	t2.micro	2/2 checks passed	View alarms

Create image
Create template from instance
Launch more like this

Instance diagnostics
Instance settings
Networking
Security
Image and templates
Monitor and troubleshoot

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input type="checkbox"/>	ubuntu-instance	i-0febe10c1037b9262	Terminated	t2.micro	-	View alarms	ap-south-1b	-
<input type="checkbox"/>	ami2	i-0bb218fb1c3240377	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1b	ec2-15-2f

▼ Application and OS Images (Amazon Machine Image) [Info](#)

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

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

Recents

My AMIs

Quick Start

☒ Owned by me

☐ Shared with me



[Browse more AMIs](#)

Including AMIs from
AWS, Marketplace and
the Community

Amazon Machine Image (AMI)

ubuntu-backup

ami-033b63acc0f6c7163

2025-07-17T13:15:39.000Z Virtualization: hvm ENA enabled: true Root device type: ebs Boot mode: uefi-preferred

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

Select

[Create new key pair](#)

name	Filesize	Filetype	Last modified
jamerz_classroom_...		File folder	30-05-2025 09...
Telegram Desktop		File folder	04-07-2025 20...
2OfEUEntY_Comp...	14,995.3...	Microsoft Edg...	02-07-2025 12...
chef-website-templ...	814,760	Compressed (z...	14-07-2025 11...
Desktop.ini	282	Configuration ...	25-05-2025 21...
mykey.pem	1,674	PEM File	17-07-2025 18...
Glpf3tS3S_DataEng...	12,270.6...	Microsoft Edg...	02-07-2025 12...

Filename	Filesize	Filetype	Last modifi...	Permissi...	Owner/Gr...
..					
.cache		File folder	17-07-2025...	drwx-----	ubuntu u...
.ssh		File folder	17-07-2025...	drwx-----	ubuntu u...
.bash_logout	220	Bash Lo...	31-03-2024...	-rw-r--r--	ubuntu u...
.bashrc	3,771	Bash RC ...	31-03-2024...	-rw-r--r--	ubuntu u...
.profile	807	Profile S...	31-03-2024...	-rw-r--r--	ubuntu u...
.sudo_as_admin...	0	SUDO_A...	17-07-2025...	-rw-r--r--	ubuntu u...
chef-website-te...	814,760	Compres...	17-07-2025...	-rw-rw-r--	ubuntu u...

1. Test Website

- Visit <http://<EC2-Public-IP>> in your browser → Should show "Hello from custom AMI"

2. Create Custom AMI

- In EC2 Console → Select your instance → Actions → **Image and templates** → **Create Image**
- Give it a name and create

- Wait until AMI becomes **available** in EC2 → AMIs

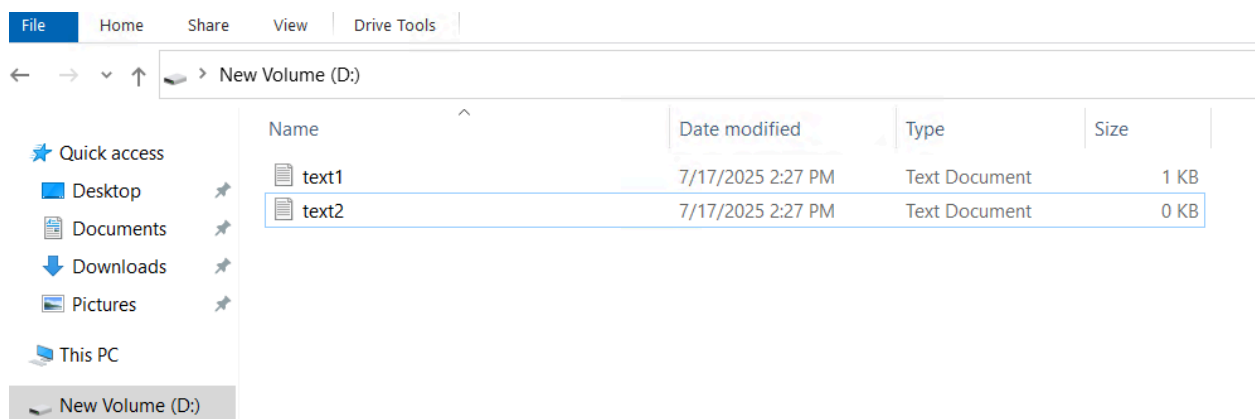
3. Launch Instance from AMI

- Go to **AMIs**, select the custom AMI → Click **Launch instance from image**
- Choose instance type, key pair, etc.
- After launch, test in browser → Web server should still work

Snapshot for Windows EC2 Instance

Objective:

- Create a snapshot (backup) of the Windows EC2 instance's volume (usually the C: drive).
- Restore it later if needed, either fully or partially.



Create snapshot [Info](#)

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-0de1e13c588776324
ap-south-1b



Snapshot details

Description

Add a description for your snapshot.

Snapshot for [D]

255 characters maximum

Encryption [Info](#)

Not encrypted

vol-0de1e13c588776324

Last updated less than a minute ago

Actions

Delete

Modify

Details

Volume ID

vol-0de1e13c588776324

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. [Learn more](#)

Fast snapshot restored

No

Attached resources

i-0d01ef3b83a1605a3 (windows-Snapshot): xvdb (attached)

Size

10 GiB

Volume state

In-use

Availability Zone

ap-south-1b

Outposts ARN

-

Type

gp2

IOPS

100

Created

Thu Jul 17 2025 19:55:43 GMT+0530 (India Standard Time)

Managed

false

Status check

Okay

Throughput

-

Multi-Attach enabled

No

Operator

-

Source

Snapshot ID

-

Encryption

☐ windows-Snap... i-0d01ef3b83a1605a3 Running t2.micro 2/2 checks passed [View alarms +](#) ap-south-1b ec2-13-2f

Volumes (1/3) Info

Owned by me

Search

	Name	Volume ID	Type	Size	IOPS	Throughput
<input checked="" type="checkbox"/>		vol-0de1e13c588776324	gp2	10 GiB	100	-
<input type="checkbox"/>		vol-0af93324e2553a7060	gp3	8 GiB	3000	125
<input type="checkbox"/>		vol-046de73946acaedf8	gp2	30 GiB	100	-

Modify volume

Create snapshot

Create snapshot lifecycle policy

Delete volume

Attach volume

Detach volume

1

19:55 GMT+5:...

18:05 GMT+5:...

19:47 GMT+5:...

Snapshots (1/1) Info

Owned by me

Search

	Name	Snapshot ID	Full snapshot size	Volume size	Description
<input checked="" type="checkbox"/>		snap-0c18735db678cbcb7	33.5 MiB	10 GiB	Snapshot for

Create volume from snapshot

Create image from snapshot

Copy snapshot

Launch copy duration calculator

1

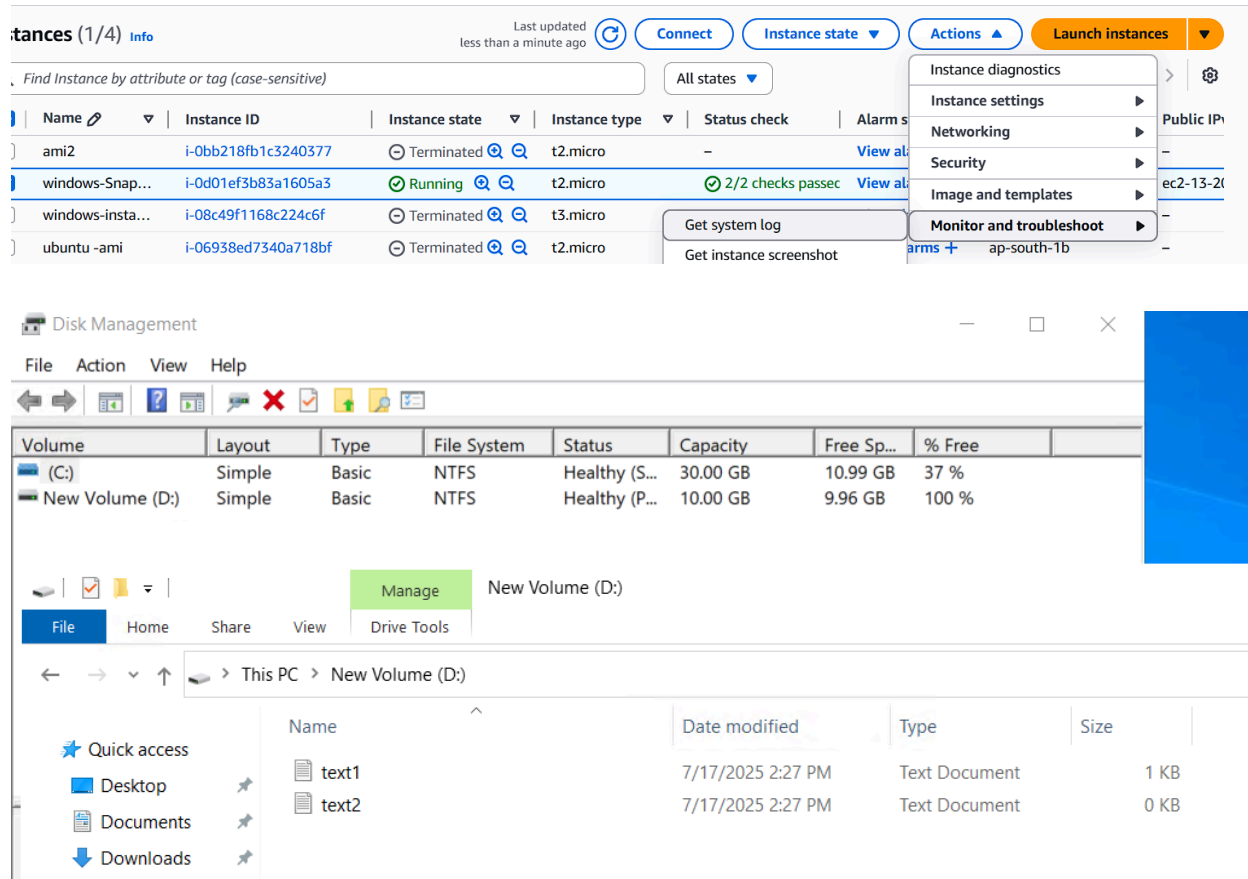
Snapshot status

Completed

Devices and drives (1)

Local Disk (C:)

10.9 GB free of 29.9 GB



Part 1: Create a Snapshot of the Windows EC2 Volume

1. Identify the Volume:

- Go to the AWS EC2 Console.
- In the left menu, click on **Volumes** under **Elastic Block Store**.
- Find the volume attached to your Windows EC2 instance (it will likely show as `/dev/sda1` or "Root device").

2. Create the Snapshot:

- Select the volume.
- Click **Actions > Create snapshot**.
- Provide a name and description for the snapshot (e.g., "Windows backup July 17").
- Click **Create snapshot**.

3. Monitor Progress:

- Go to the **Snapshots** section in EC2.
 - Wait for the status to change from "pending" to "completed".
-

Part 2: Restore the Snapshot

Option A: Restore as a New Root Volume (Full Recovery)

1. Create a Volume from the Snapshot:

- In the EC2 Console, go to **Snapshots**.
- Select the snapshot and click **Actions > Create volume**.
- Select the same Availability Zone (AZ) as the original EC2 instance.

2. Detach the Old Volume (Optional if full restore):

- Stop the Windows EC2 instance.
- Go to the **Volumes** section, find the root volume attached to the instance.
- Select it and click **Actions > Detach volume**.

3. Attach the New Volume:

- Go to the new volume created from the snapshot.
- Click **Actions > Attach volume**.
- Select the instance and set the device name as `/dev/sda1` (this is critical to make it the root device).

4. Start the EC2 Instance:

- After attaching the volume, start the instance.
- It should now boot using the restored volume.

3. Cost Optimization (Mumbai Region)

Step-by-Step:

1. Go to AWS Cost Explorer

- Enable it if it's the first time
- Review usage and filter by **Mumbai (ap-south-1)** region

2. Check for Orphaned Resources

- Go to:
 - **EC2 → Volumes** → Look for unattached volumes
 - **EC2 → Snapshots** → Look for old, unused snapshots
 - **Elastic IPs** → Check for unassociated IPs
 - **AMIs** → Unused custom images

3. Cleanup

- Delete unattached EBS volumes
- Delete old snapshots
- Release unused Elastic IPs
- Deregister and delete AMIs if not needed