

EC2 INSTANCE STORAGE



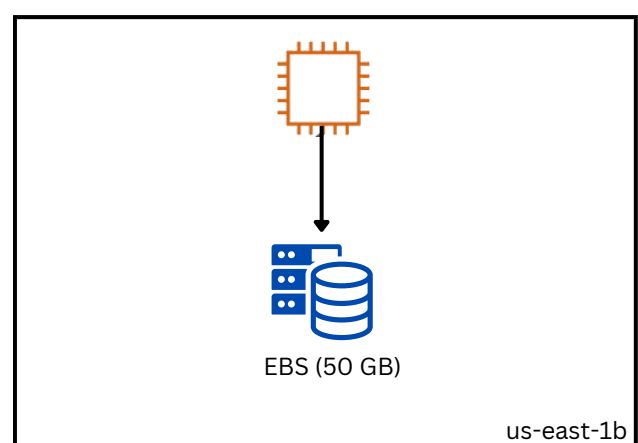
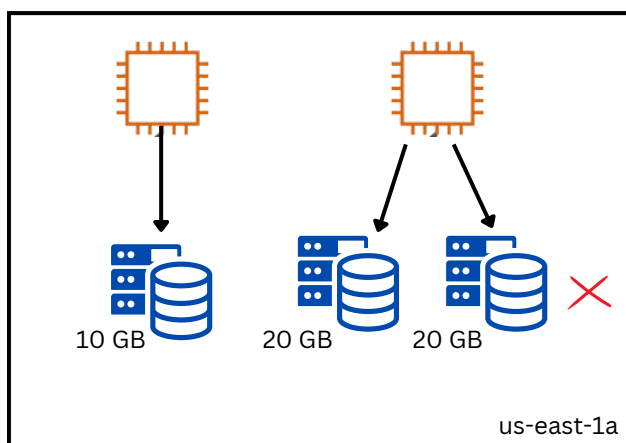
What's an EBS Volume

- An EBS Volume (Elastic Block Store) is like a removable storage drive for your cloud server (instance). Here's a simple explanation:
- It's a network drive that you can attach to your server to store files and data.
- Your data stays safe even if the server is turned off or deleted.
- You can only connect one EBS volume to one server at a time (basic level).
- It works only in the specific area (Availability Zone) where it was created.
- Think of it as a USB stick you plug into your server over the network.
- **Free Tier: You get 30 GB of free storage per month, either as a fast SSD or a slower magnetic drive.**

Here's a simpler version of the explanation about EBS Volumes:

- It's a virtual drive (not a physical one).
- It connects to your server using the network, so it might be a tiny bit slower than local storage.
- You can detach it from one server and quickly attach it to another.
- It's tied to a specific Availability Zone (AZ), meaning:
 - A volume in us-east-1a won't work in us-east-1b.
 - To move it to another zone, you need to take a snapshot (a copy) and restore it in the new zone.
- You choose the size (in GB) and speed (IOPS) when creating it.
- You pay for the size and speed you pick, even if you don't use it fully.
- You can make the drive bigger whenever you need.

EBS Volume - Example



EBS – DELETE ON TERMINATION ATTRIBUTE



Here's a simpler version:

What happens to EBS when a server (EC2 instance) is deleted:

- By default, the main drive (root EBS volume) is deleted when the server is deleted.
- Any extra drives (other attached EBS volumes) are not deleted.

You can change this setting using the AWS Console or CLI.

Example use case: If you want to keep the main drive (root volume) even after deleting the server, you can disable the delete option

Following Steps

- Click on instance
- Click on Storage tab
- Block devices

▼ Root device details

Root device name

/dev/sda1

Root device type

EBS

EBS optimization

disabled

▼ Block devices

Filter block devices

| <input checked="" type="checkbox"/> | Volume ID | Device name | Volume size (GiB) | Attachment status | Attachment time | Encrypted | KMS key ID | Delete on terminat |
|-------------------------------------|-----------------------|-------------|-------------------|-------------------|---------------------------|-----------|------------|--------------------|
| <input checked="" type="checkbox"/> | vol-05b252960d305e2fc | /dev/sda1 | 8 | Attached | 2025/01/27 20:51 GMT+5:30 | No | – | Yes |

Volumes (1/1) Info

Refresh

Actions

Create v

Saved filter sets

Choose filter set

Search

| <input checked="" type="checkbox"/> | Name | Volume ID | Type | Size | IOPS | Throughput | Snapshot ID | Created | Availability Zone | Volume state | Al |
|-------------------------------------|------|-----------------------|------|-------|------|------------|-----------------|---------------------------|-------------------|---------------------|----|
| <input checked="" type="checkbox"/> | - | vol-05b252960d305e2fc | gp3 | 8 GiB | 3000 | 125 | snap-00cdccb... | 2025/01/27 20:51 GMT+5... | us-east-1b | In-use | N |

Volume ID: vol-05b252960d305e2fc

Details

Status checks

Monitoring

Tags

| | | | |
|--|--|--|---|
| <div>Volume ID</div> <div> vol-05b252960d305e2fc</div> | <div>Size</div> <div> 8 GiB</div> | <div>Type</div> <div>gp3</div> | <div>Status check</div> <div> Okay</div> |
| <div>AWS Compute Optimizer finding</div> <div> Opt-in to AWS Compute Optimizer for recommendations. Learn more</div> | <div>Volume state</div> <div> In-use</div> | <div>IOPS</div> <div>3000</div> | <div>Throughput</div> <div>125</div> |
| <div>Fast snapshot restored</div> <div>No</div> | <div>Availability Zone</div> <div>us-east-1b</div> | <div>Created</div> <div> Mon Jan 27 2025 20:51:02 GMT+0530 (India Standard Time)</div> | <div>Multi-Attach enabled</div> <div>No</div> |
| <div>Attached resources</div> <div>i-049d470bdc5132e8 (aws-learning): /dev/sda1 (attached)</div> | <div>Outposts ARN</div> <div>-</div> | <div>Managed</div> <div>false</div> | <div>Operator</div> <div>-</div> |

Source

CREATE SECOND VOLUME



- Click on **Create volume**
- **Volume settings**
- Volume type : **General Purpose SSD gp2**
- Volume Size : **5 GB**
- Available Zone : **us-east-1b**

EC2 > Volumes > Create volume

Create volume Info

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

Volume settings

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.

Throughput (MiB/s) Info
Not applicable

Availability Zone Info
us-east-1b

Snapshot ID - optional Info
Don't create volume from a snapshot

Encryption Info
Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.
☐ Encrypt this volume

Tags - optional Info

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 |
|--------|--------------------|
| Volume | Create for testing |

[Add tag](#)

You can add 49 more tags.

GitHub - Burhan1009/Wordl | Create volume | EC2 | us-east-1 | Volume details | EC2 | us-east-1 | Dashboard | EC2 | us-west-2 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#VolumeDetails:volumeId=vol-0a79b54183ec33b31

EC2 > Volumes > vol-0a79b54183ec33b31

vol-0a79b54183ec33b31

Volume ID
vol-0a79b54183ec33b31

AWS Compute Optimizer finding
Optimize to AWS Compute Optimizer for recommendation
[Learn more](#)

Fast snapshot restored
No

Attached resources
-

Source
Snapshot ID
-

Encryption
Encryption
Not encrypted

KMS key ID
-

KMS key alias
-

KMS key ARN
-

Size
5 GiB

Volume state
Available

Availability Zone
us-east-1b

Outposts ARN
-

Type
gp2

IOPS
100

Created
Mon Jan 27 2025 21:14:23 GMT+0530 (India Standard Time)

Managed
false

Status check
Okay

Throughput
-

Multi-Attach enabled
No

Operator
-

Tags

Volume status
Okay

I/O status
Enabled

I/O status updated on
Mon Jan 27 2025 21:14:23 GMT+0530 (India Standard Time)

Description
-

Auto-enabled I/O
Disabled

Availability Zone
us-east-1b

I/O performance
Not applicable

I/O performance updated on
-

Description
This feature only applies to attached io1, io2, and gp3 volumes.

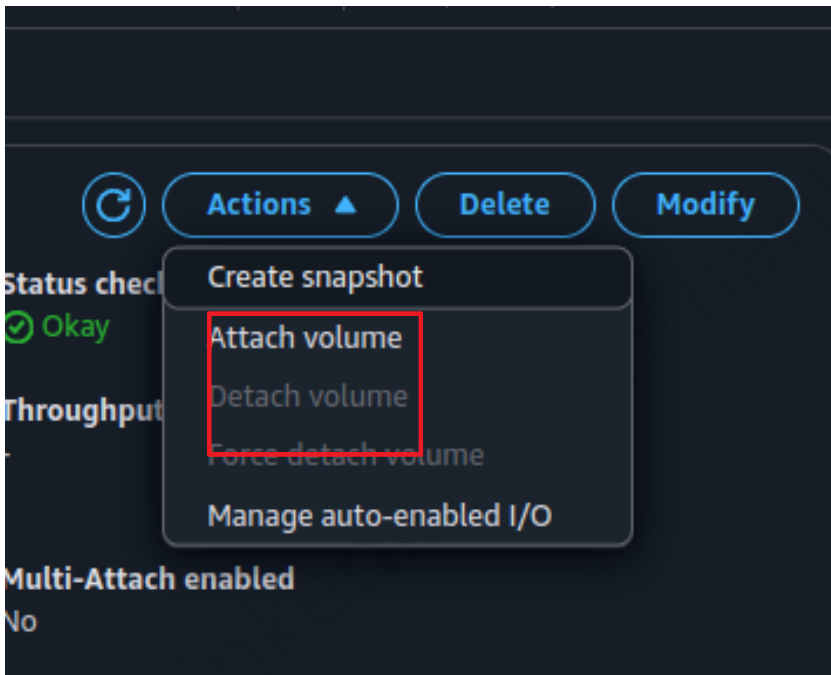
For more information about working with volume status checks and events, see [Monitor the status of your volumes](#) in the Amazon EC2 user guide. If you need technical assistance with your volume, post your issue to the [Developer Forums](#) or visit our [Support Center](#).

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WAIT FOR ATTACHED VOLUME



- Click on **Create volume**
- **Volume settings**
- Volume type : **General Purpose SSD gp2**
- Volume Size : **5 GB**
- Available Zone : **us-east-1b**



aws us-east-1b

EC2 > Volumes > Create volume

Create volume Info

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

Volume settings

Volume type Info
General Purpose SSD (gp3)

Size (GiB) Info
1
Min: 1 GiB, Max: 16384 GiB.

IOPS Info
3000
Min: 3000 IOPS, Max: 16000 IOPS.

Throughput (MiB/s) Info
125
Min: 125 MiB, Max: 1000 MiB, Baseline: 125 MiB/s.

Availability Zone Info
us-east-1b

Snapshot ID - optional Info
Don't create volume from a snapshot

Encryption Info
☐ Encrypt this volume
Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.

Tags - optional Info

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.
No tags associated with the resource.

[Add tag](#)
You can add 50 more tags.

Snapshot summary Info

[Click refresh to view backup information](#)
The volume type that you select and the tags that you assign determine whether the volume will be backed up by any Data Lifecycle Manager policies.

[Cancel](#) [Create volume](#)

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-0810306ad943cae3

Availability Zone
us-east-1b

Instance
i-049d470bdc5132e8 (aws-learning) (running)

Device name
/dev/sdf

Cancel Attach volume

Volumes (2)

| Name | Volume ID | Type | Size | IOPS | Throughput | Snapshot ID | Created | Availability Zone | Volume state | Alarm status | Attached resou |
|------|-----------------------|------|-------|------|------------|----------------|----------------------------|-------------------|--------------|--------------|----------------|
| - | vol-0810306ad943cae3 | gp3 | 1 GiB | 3000 | 125 | - | 2025/01/27 21:36 GMT+5:... | us-east-1b | In-use | No alarms | + i-049d470bdc |
| - | vol-05b252960d305e2fc | gp3 | 8 GiB | 3000 | 125 | snap-00cdcc... | 2025/01/27 20:51 GMT+5:... | us-east-1b | In-use | No alarms | + i-049d470bdc |

WE HAVE AVAILABLE TWO VOLUMES

Instances (1/1)

| Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DNS | Public IPv4 ... | Elastic IP | IPv6 IPs | Mo |
|--------------|--------------------|----------------|---------------|-----------------|--------------|-------------------|-------------------------|-----------------|------------|----------|------|
| aws-learning | i-049d470bdc5132e8 | Running | t2.micro | 2/2 checks pass | View alarms | us-east-1b | ec2-54-236-213-57.co... | 54.236.213.57 | - | - | disc |

i-049d470bdc5132e8 (aws-learning)

Details Status and alarms Monitoring Security Networking **Storage** Tags

Root device details

Root device name
/dev/sda1

Root device type
EBS

EBS optimization
disabled

Block devices

| Volume ID | Device name | Volume size (GiB) | Attachment status | Attachment time | Encrypted | KMS key ID | Delete on termination |
|-----------------------|-------------|-------------------|-------------------|---------------------------|-----------|------------|-----------------------|
| vol-05b252960d305e2fc | /dev/sda1 | 8 | Attached | 2025/01/27 20:51 GMT+5:30 | No | - | Yes |
| vol-0810306ad943cae3 | /dev/sdf | 1 | Attached | 2025/01/27 21:38 GMT+5:30 | No | - | No |

Volume monitoring (1)

Average read latency (ms/op)

Average write latency (ms/op)

Read throughput (KiB/s)

Write throughput (KiB/s)

HERE WE CHANGE AVAILABILITY ZONE



- Volume type : **General Purpose SSD gp2**
- Volume Size : **2 GB**
- Available Zone : **us-east-1a**

Linkedin : buhrhankhan503

GitHub - Burhan1009/Word - Create volume | EC2 | us-east-1 | us-east-1 | Instance details | EC2 | us-east-1 | +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateVolume:

EC2 > Volumes > Create volume

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

Volume settings

Volume type Info
General Purpose SSD (gp3)

Size (GiB) Info
3
Min: 1 GiB, Max: 16384 GiB

IOPS Info
3000
Min: 3000 IOPS, Max: 16000 IOPS

Throughput (MiB/s) Info
125
Min: 125 MiB, Max: 1000 MiB, Baseline: 125 MiB/s

Availability Zone Info
us-east-1a

Snapshot ID - optional Info
Don't create volume from a snapshot

Encryption Info
Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.
☐ Encrypt this volume

Tags - optional Info
A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.
No tags associated with the resource.
[Add tag](#)
You can add 50 more tags.

Snapshot summary Info
[Click refresh to view backup information.](#)
The volume type that you select and the tags that you assign determine whether the volume will be backed up by any Data Lifecycle Manager policies.

[Cancel](#) [Create volume](#)

Successfully created volume vol-0f83abb674ecc6f74

Volumes (3) Info

Save filter sets Choose filter set

| <input type="checkbox"/> | Name | Volume ID | Type | Size | IOPS | Throughput | Snapshot ID | Created | Availability Zone | Volume state | Alarm status | Attached resources | Status check | En... |
|--------------------------|------|-----------------------|------|-------|------|------------|----------------|---------------------------|-------------------|--------------|--------------|------------------------------|--------------|-------|
| <input type="checkbox"/> | - | vol-0810306ad945cae3 | gp3 | 1 GiB | 3000 | 125 | - | 2025/01/27 21:36 GMT+5... | us-east-1b | In-use | No alarms | + I-049d470bdcd5132e8 (aw... | Okay | Not |
| <input type="checkbox"/> | - | vol-05b25296cd395c2fc | gp3 | 8 GiB | 3000 | 125 | snap-00cdcc... | 2025/01/27 20:51 GMT+5... | us-east-1b | In-use | No alarms | + I-049d470bdcd5132e8 (aw... | Okay | Not |
| <input type="checkbox"/> | - | vol-0f83abb674ecc6f74 | gp3 | 3 GiB | 3000 | 125 | - | 2025/01/27 21:56 GMT+5... | us-east-1a | Available | No alarms | + - | Okay | Not |

vol-0f83abb674ecc6f74

Volume ID vol-0f83abb674ecc6f74

AWS Compute Optimizer finding
[Opt-in to AWS Compute Optimizer for recommendation](#)
[Learn more](#)

Fast snapshot restored
No

Size 3 GiB

Volume state Available

Availability Zone
us-east-1a

Type
gp3

IOPS
3000

Created
 Mon Jan 27 2025 21:56:16 GMT+0530 (India Standard Time)

Multi-Attach enabled
No

[Actions](#) [Delete](#) [Modify](#)

Status check Okay

Throughput
125

[Create snapshot](#)
[Attach volume](#)
[Detach volume](#)
[Force detach volume](#)
[Manage auto-enabled I/O](#)

EC2 > Volumes > vol-0f83abb674ecc6f74 > 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-0f83abb674ecc6f74

Availability Zone
us-east-1a

Instance Info
Search instance ID or name tag

No matching running or stopped instances in us-east-1a
Select a device name

[Cancel](#) [Attach volume](#)

EBS SNAPSHOT



What's an EBS Snapshot

- EBS Snapshot (Elastic Block Store Snapshot) is a backup of your data stored in Amazon Web Services (AWS). EBS provides block-level storage volumes that can be attached to your EC2 instances.
- When you create an EBS snapshot, it captures the exact state of your EBS volume at a specific point in time. This snapshot acts like a backup of your data, and you can use it to restore your data or create a new volume if needed.

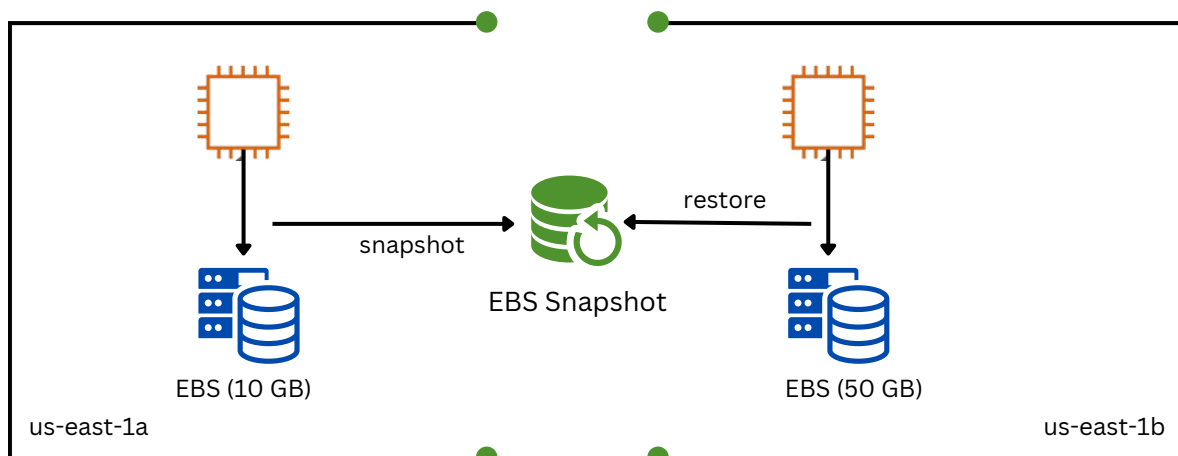
Simple Explanation:

Think of an EBS snapshot like taking a photo of your hard drive at a specific moment. Later, if anything goes wrong, you can use that "photo" (snapshot) to restore your data to how it was when the photo was taken.

Here's a simpler version of what you're saying:

- Take a backup of your EBS volume: This means creating a copy of your data at a specific moment, like saving a snapshot of what your data looks like right now.
- You don't have to detach the volume: You can take the backup without stopping or disconnecting the volume, but it's better to do so for safety.
- You can copy backups to different places: You can move your backups to different availability zones (AZ) or even different regions if needed, for extra protection.

EBS Snapshot - Example



EBS Snapshots Features



Here's a simpler version of the features for EBS Snapshots:

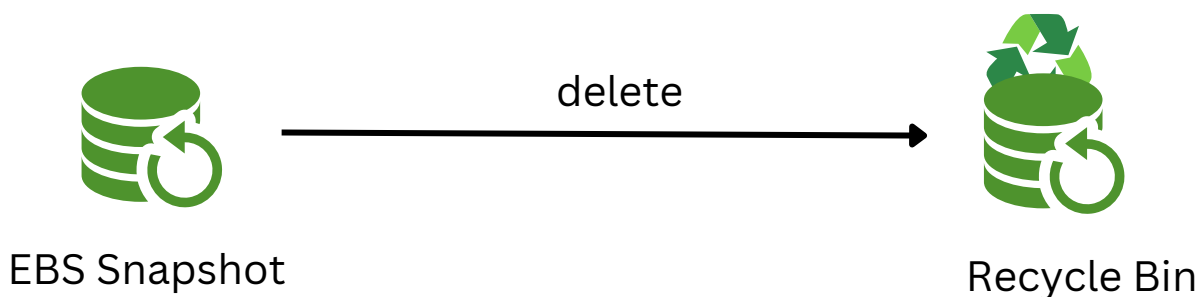
EBS Snapshot Archive

- You can move your backup to a cheaper storage option that saves you up to 75% of the cost.
- If you need to restore it, it might take 1 to 3 days.

Recycle Bin for EBS Snapshots

- You can set rules to keep deleted backups for a while, just in case you delete something by mistake.
- You can decide how long you want to keep these deleted backups (from 1 day to 1 year).

Example



EBS Snapshots Hands On

Creating snapshot..

• Step 1 Open the EC2 Dashboard

1. In the search bar at the top, type "EC2" and select EC2 from the results.
2. This will open the EC2 Dashboard.

• Step 2: Go to "Volumes"

1. In the left-hand menu under "Elastic Block Store", click on "Volumes".
2. This will show a list of all your EBS volumes.

• Step 4: Select the Volume to Snapshot

1. From the list of volumes, select the EBS volume you want to create a snapshot of.
2. Click on the volume to open its details.

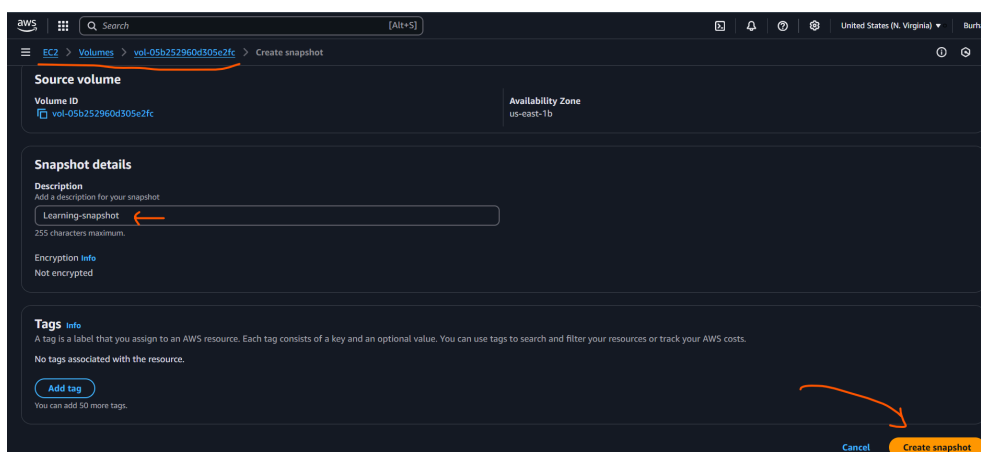
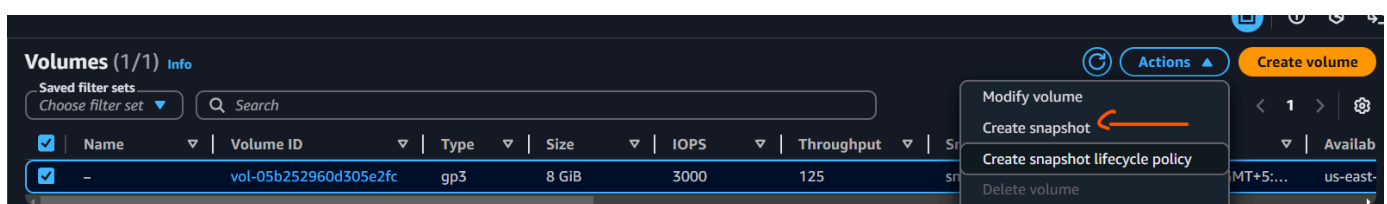
• Step 5: Create Snapshot

1. With the volume selected, click the "Actions" button at the top.
2. From the dropdown menu, choose "Create Snapshot".

• Step 6: Provide Snapshot Details

- A new window will pop up asking you to provide a name and description for your snapshot

1. Name: Give your snapshot a meaningful name.
2. Description: Add an optional description (e.g., "Backup before update")
3. After filling in the details, click "Create Snapshot".



EBS Snapshots Hands On

Source volume

Volume ID: vol-05b252960d305e2fc

Availability Zone: us-east-1b

Snapshot details

Description: Learning-snapshot

Encryption Info: Not encrypted

Tags Info: No tags associated with the resource.

Buttons: Cancel, Create snapshot

Successfully created snapshot

Linkedin : buhrhankhan503

Successfully created snapshot snap-09dd0f980e5ba0fb4 from volume vol-05b252960d305e2fc.

If you need your snapshot to be immediately available consider using Fast Snapshot Restore.

Volumes (1) Info

| Name | Volume ID | Type | Size | IOPS | Throughput | Snapshot ID |
|------|-----------------------|------|-------|------|------------|-----------------|
| - | vol-05b252960d305e2fc | gp3 | 8 GiB | 3000 | 125 | snap-00cdccb... |

Snapshots (1/1) Info

| Name | Snapshot ID | Volume size | Description | Storage tier | Snapshot status | Started |
|------|------------------------|-------------|-------------------|--------------|-----------------|------------|
| - | snap-09dd0f980e5ba0fb4 | 8 GiB | Learning-snapshot | Standard | Completed | 2025/01/28 |

Snapshot ID: snap-09dd0f980e5ba0fb4

Details

Snapshot ID: snap-09dd0f980e5ba0fb4

Progress: 100%

Started: Tue Jan 28 2025 11:51:10 GMT+0530 (India Standard Time)

Snapshot status: Completed

Owner: 727646493187

Description: Learning-snapshot

Create a Volume from Snapshot

- **Step 1 Create Volume from Snapshot**

1. With the snapshot selected, click the "Actions" button at the top.
2. From the dropdown menu, choose "Create Volume"

- **Step 2 Configure Volume Details**

1. In the "Create Volume" dialog, set the following
2. Availability Zone: Select the availability zone where you want to create the volume.
Ensure it matches the zone of the EC2 instance if you plan to attach it.
3. Size: The size will default to the snapshot size but can be increased.
4. Volume Type: Choose the appropriate volume type (e.g., General Purpose SSD, Provisioned IOPS SSD).
5. Encryption: If the snapshot is encrypted, the volume will also be encrypted.
Otherwise, you can optionally enable encryption for the new volume.

- **Step 3 Create the Volume**

1. After configuring the volume details, click the "Create Volume" button.
2. The volume will now be created, and its status will show as "creating".
3. Once the process is complete, the status will change to "available".

- **Step 4 Create the Volume**

1. After configuring the volume details, click the "Create Volume" button.
2. The volume will now be created, and its status will show as "creating".
3. Once the process is complete, the status will change to "available".

- **Step 5 Attach the Volume to an Instance (Optional)**

1. If needed, attach the volume to an EC2 instance:
2. Go to the "Volumes" section under "Elastic Block Store" in the EC2 dashboard.
3. Select the newly created volume and click the "Actions" button.
4. From the dropdown, choose "Attach Volume".
5. In the "Attach Volume" dialog, select the instance to attach the volume to.
6. Click "Attach" to complete the process.

- **Step 6 Verify the Volume**

1. Log in to the EC2 instance (if attached) to verify that the new volume is available.
2. Use commands like `lsblk` or `df -h` to list block devices and mounted file systems.

Create a Volume from Snapshot

Linkedin : buhrhankhan503

The screenshot shows the AWS Snapshots console. A table lists snapshots, with one selected. A context menu is open over the selected snapshot, showing options: 'Create snapshot', 'Create volume from snapshot', 'Create image from snapshot', and 'Copy snapshot'. An orange arrow points to the 'Create volume from snapshot' option.

| Owned by me | Name | Snapshot ID | Volume size | Description | Storage tier | Snapshot status | Started |
|-------------------------------------|------|------------------------|-------------|-------------------|--------------|-----------------|----------------------------|
| <input checked="" type="checkbox"/> | - | snap-09dd0f980e5ba0fb4 | 8 GiB | Learning-snapshot | Standard | Completed | 2025/01/28 11:51 GMT+5:... |

The screenshot shows the 'Create volume' page in the AWS console. The 'Volume settings' section is visible, showing the 'Snapshot ID' as 'snap-09dd0f980e5ba0fb4'. The 'Volume type' is set to 'General Purpose SSD (gp3)'. The 'Size (GiB)' is set to '8'. An orange arrow points to the 'Size (GiB)' input field.

Create volume Info

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

Volume settings

Snapshot ID
snap-09dd0f980e5ba0fb4

Volume type Info
General Purpose SSD (gp3)

Size (GiB) Info
8
Min: 1 GiB, Max: 16384 GiB.

The screenshot shows the 'IOPS' and 'Throughput' settings in the 'Create volume' page. The 'IOPS' is set to '3000' and the 'Throughput' is set to '125'. The 'Availability Zone' is set to 'us-east-1c'. An orange arrow points to the 'Availability Zone' dropdown menu.

IOPS Info
3000
Min: 3000 IOPS, Max: 16000 IOPS.

Throughput (MiB/s) Info
125
Min: 125 MiB, Max: 1000 MiB. Baseline: 125 MiB/s.

Availability Zone Info
us-east-1c

Tow Volume Available on Instance

The screenshot shows the AWS Volumes console. A table lists volumes, with two volumes shown. The 'Availability Zone' for both volumes is 'us-east-1c'. An orange box highlights the 'us-east-1c' availability zone for both volumes.

| Size | IOPS | Throughput | Snapshot ID | Created | Availability Zone | Volume state | Alarm status | Attached resources | Status check |
|-------|------|------------|-----------------|----------------------------|-------------------|--------------|--------------|------------------------------|--------------|
| 8 GiB | 3000 | 125 | snap-00cdccb... | 2025/01/27 20:51 GMT+5:... | us-east-1b | In-use | No alarms | + i-049d470bdc5132e8 (aw...) | Okay |
| 8 GiB | 3000 | 125 | snap-09dd0f9... | 2025/01/28 12:24 GMT+5:... | us-east-1c | Available | No alarms | + - | Okay |

In AWS, the Volume Snapshot Recycle Bin is a feature that allows you to recover Amazon Elastic Block Store (EBS) snapshots that were deleted accidentally or intentionally. When you delete a snapshot, it is not immediately removed from AWS. Instead, it is moved to the Snapshot Recycle Bin, where it is retained for a specified period (typically up to 30 days) before being permanently deleted. This provides a safety net for recovering important snapshots

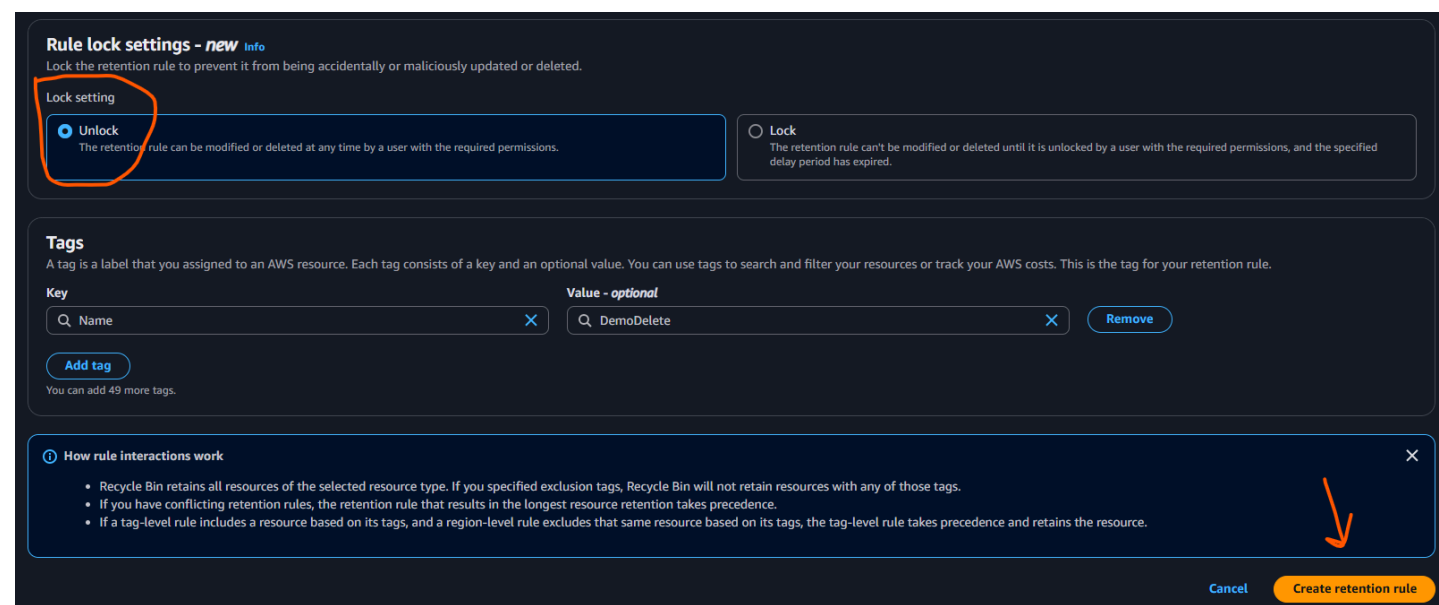
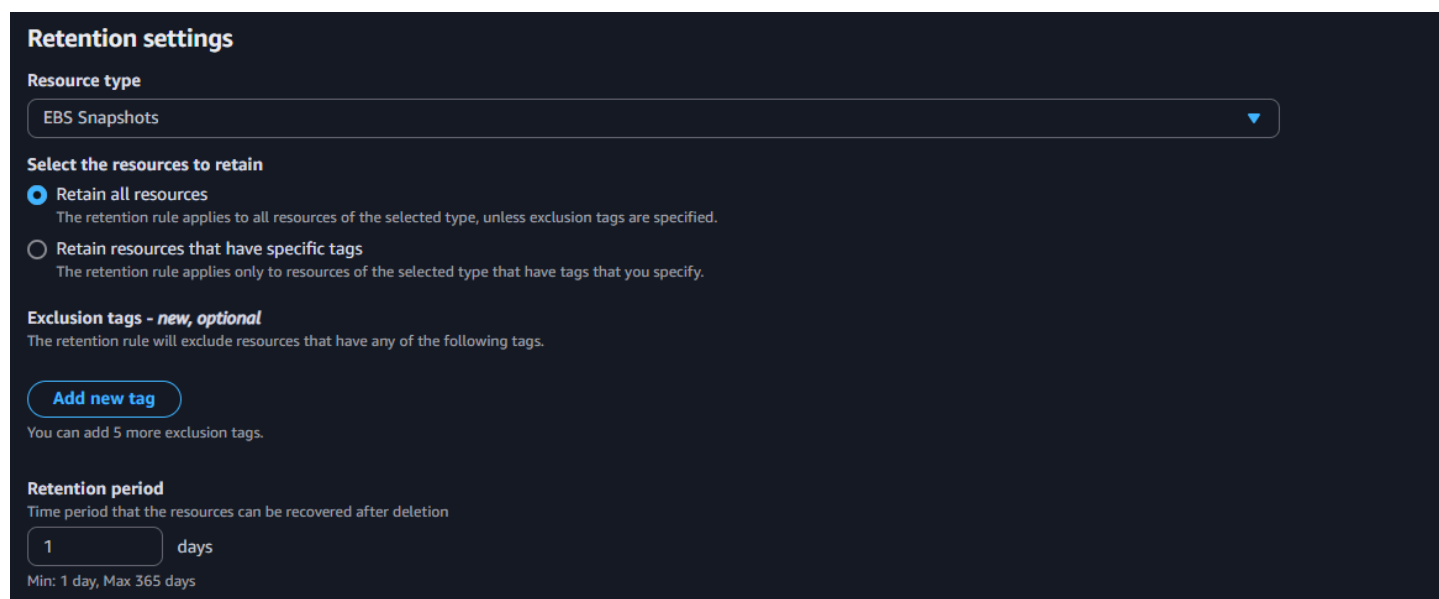
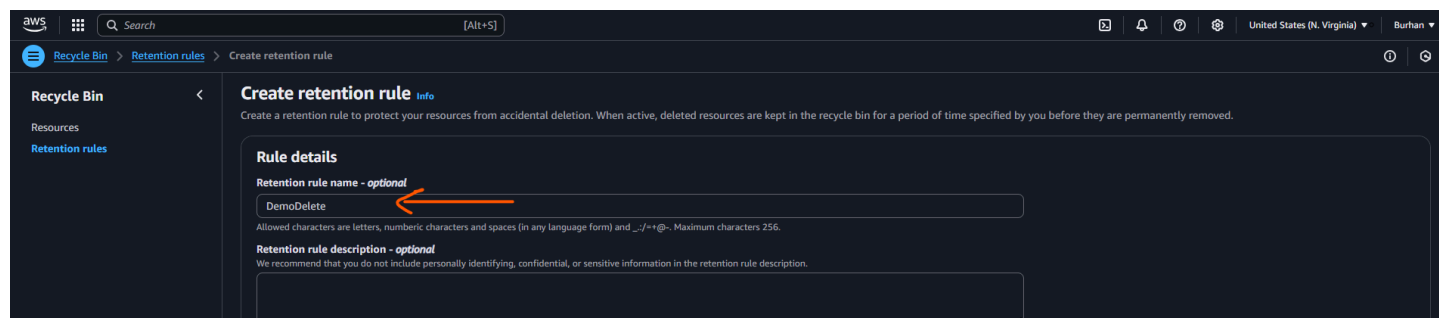
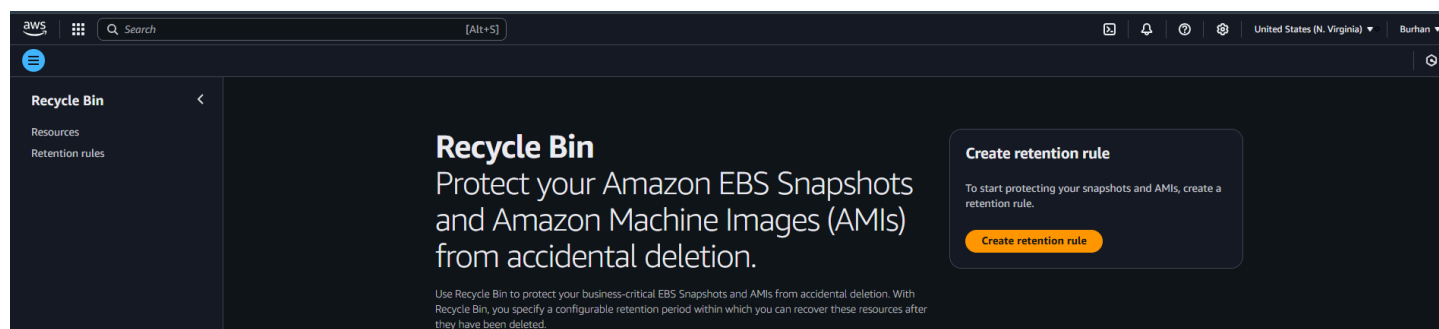
The screenshot shows the AWS Snapshots console. A table lists snapshots, with one snapshot shown. The 'Recycle Bin' button is highlighted with an orange arrow.

| Snapshot ID | Volume size | Description | Storage tier | Snapshot status | Started | Progress |
|------------------------|-------------|-------------------|--------------|-----------------|----------------------------|----------|
| snap-09dd0f980e5ba0fb4 | 8 GiB | Learning-snapshot | Standard | Completed | 2025/01/28 11:51 GMT+5:... | 100% |

How to Active Recycle Bin

Linkedin : buhrhankhan503

Click On Recycle Bin & Create retention rule



How to Active Recycle Bin

Linkedin : buhrhankhan503

Successfully created retention rule

The screenshot shows the AWS console interface. At the top, a green notification bar states "Successfully created retention rule F9MCpwD8Qt6". Below this, the "Retention rules (1)" section is visible, showing a table with one rule: "DemoDelete" with ID "F9MCpwD8Qt6", a retention period of "1 Days", and a "Rule lock state" of "Unlocked".

Below the retention rules, the "Snapshots (1/1)" section is shown. It includes a table with one snapshot: "Learning-snapshot" with ID "snap-09dd0f980e5ba0fb4", a volume size of "8 GiB", a storage tier of "Standard", and a status of "Completed".

Below the snapshot table, the "Snapshot ID: snap-09dd0f980e5ba0fb4" details are shown. The "Storage tier" tab is selected, showing the "Storage tier" as "Standard" and the "Tiering status" as "-". An orange arrow points to the "Storage tier" label.

Delete Snapshot

The screenshot shows the AWS console interface. The "Snapshots (1/1)" section is visible, showing the "Learning-snapshot" with ID "snap-09dd0f980e5ba0fb4".

Below the snapshot table, the "Snapshot ID: snap-09dd0f980e5ba0fb4" details are shown. The "Storage tier" tab is selected, showing the "Storage tier" as "Standard" and the "Tiering status" as "-".

A modal dialog box is open, titled "Delete snap-09dd0f980e5ba0fb4?". The dialog asks "Are you sure that you want to delete snap-09dd0f980e5ba0fb4?". Below the question, it says "To confirm deletion, type *delete* in the field." and there is a text input field containing the word "delete". An orange arrow points to the "delete" text in the input field. At the bottom right of the dialog, there are "Cancel" and "Delete" buttons.

Recycle Bin Resources to Recover your snapshot

The screenshot shows the AWS console interface. The "Recycle Bin" section is visible, showing a table with one resource: "Learning-snapshot" with ID "snap-09dd0f980e5ba0fb4", a bin entry date of "Tue Jan 28 2025 12:41:52 ...", a bin exit date of "Wed Jan 29 2025 12:41:52 ...", and a description of "Learning-snapshot".

Below the resource table, the "Resources (1)" section is visible, showing a table with one resource: "Learning-snapshot" with ID "snap-09dd0f980e5ba0fb4", a bin entry date of "Tue Jan 28 2025 12:41:52 ...", a bin exit date of "Wed Jan 29 2025 12:41:52 ...", and a description of "Learning-snapshot". An orange arrow points to the "Resources (1)" section.

Terraform configuration that creates an AWS infrastructure with the following components

- **EBS Volume:** Creates an Elastic Block Store (EBS) volume.
- **EBS Snapshot:** Takes a snapshot of the volume.
- **Recycle Bin:** Adds the snapshot to an AWS Recycle Bin with a specified retention period.

Explanation of the Code

- **AWS Provider:** Specifies the AWS region to deploy resources.
- **EBS Volume:** Creates a 8 GiB EBS volume in the specified availability zone.
- **EBS Snapshot:** Creates a snapshot of the EBS volume.

Recycle Bin Rule

- Configures the Recycle Bin to retain snapshots for 7 days.
- Applies to resources of type EBS_SNAPSHOT.

Tag Snapshot for Recycle Bin: Adds a tag to the snapshot, associating it with the Recycle Bin.

Steps to Use

1. Save this code to a file, e.g., **main.tf**.
2. Run the following commands: **terraform init** , **terraform plan** , **terraform apply**
3. Confirm the resources to create by typing **yes** when prompted.

2

```
main.tf > resource "aws_ebs_volume" "example" > tags
provider "aws" {
  region = "us-east-1" # Change to your preferred region
}

# Create an EBS Volume
resource "aws_ebs_volume" "example" {
  availability_zone = "us-east-1a" # Adjust as per your region
  size              = 8             # Size in GiB
  tags = {
    Name = "example-ebs-volume"
  }
}

# Create a Snapshot of the Volume
resource "aws_ebs_snapshot" "example" {
  volume_id = aws_ebs_volume.example.id
  tags = {
    Name = "example-ebs-snapshot"
  }
}
```

1

```
# Create a Snapshot of the Volume
resource "aws_ebs_snapshot" "example" {
  volume_id = aws_ebs_volume.example.id
  tags = {
    Name = "example-ebs-snapshot"
  }
}

# Create a Recycle Bin Rule
resource "aws_recycle_bin_rule" "example" {
  resource_type = "EBS_SNAPSHOT"

  retention_period {
    retention_period_value = 7 # Retain for 7
    retention_period_unit  = "DAYS"
  }

  tags = {
    Name = "example-recycle-bin-rule"
  }
}

# Add the Snapshot to the Recycle Bin using a
resource "aws_tag" "example_snapshot_tag" {
  resource_id = aws_ebs_snapshot.example.id
  key         = "recycle-bin"
  value       = "true"
}
```