

# **Attaching a EBS volume to a volume to a running instance , Snapshot , AMI and elastic IP And AMAZON S3 BUCKET**

## STEP 1 : CREATE EC2 INSTANCE

The screenshot shows the AWS EC2 'Launch an instance' wizard. At the top, there's a navigation bar with the AWS logo, a 'Services' dropdown, a search bar, and account information for 'Mumbai' and 'SHIVANSH\_KUNTAL'. Below the navigation, the breadcrumb trail shows 'EC2 > ... > Launch an instance'. The main content area has a title 'Launch an instance' with a help icon. A descriptive text explains that Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. It encourages users to follow simple steps to get started. The configuration form is divided into sections: 'Name and tags', 'Application and OS Images (Amazon Machine Image)', and 'Summary'. In the 'Name and tags' section, the 'Name' field contains '22BCY10290\_SHIVANSH\_KUNTAL'. In the 'Application and OS Images (Amazon Machine Image)' section, there's a search bar with placeholder text 'Search our full catalog including 7000s of application and OS images'. The 'Summary' section on the right lists the configuration details: 1 instance, Amazon Linux 2023 AMI 2023.6.2, t2.micro instance type, New security group, and 1 volume(s) - 8 GiB storage. It also indicates a 'Free tier: In your first year' and includes 'Cancel', 'Launch instance', and 'Preview code' buttons.

Number of instances [Info](#)  
1

Software Image (AMI)  
Amazon Linux 2023 AMI 2023.6.2 [read more](#)  
ami-04a37904ff27fa53

Virtual server type (instance type)  
t2.micro

Firewall (security group)  
New security group

Storage (volumes)  
1 volume(s) - 8 GiB

① Free tier: In your first year X

Cancel [Launch instance](#) [Preview code](#)

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links like EC2 Dashboard, EC2 Global View, Events, Instances (with sub-links for Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity, and Reservations), Images (AMIs, AMI Catalog), Elastic Block Store (Volumes, Snapshots, Lifecycle Manager), Network & Security (Security Groups), CloudShell, and Feedback. The main content area has a search bar at the top. Below it, a table lists one instance: i-08458bf984e0542e9, which is running, t2.micro, and has 2/2 checks passed. A detailed view for this instance is open, showing its summary, including Public IPv4 address (3.111.40.184), Private IPv4 address (172.31.15.221), and other details like instance state (Running) and instance type (t2.micro). At the bottom right of the main content area, there's a note about copyright (© 2024, Amazon Web Services, Inc. or its affiliates.) and links for Privacy, Terms, and Cookie preferences.

## STEP 2: GOTO -> TOP RIGHT CORNER -> CREATE VOLUME

The screenshot shows the 'Create an Amazon EBS volume' wizard. It's the first step, titled 'Volume settings'. It asks for the volume type (General Purpose SSD (gp3)), size (10 GiB), IOPS (3000), throughput (125 MiB/s), availability zone (ap-south-1b), and a snapshot ID (optional). There are also fields for encryption and a checkbox to encrypt the volume. The bottom of the screen shows standard AWS footer links for CloudShell, Feedback, Copyright (© 2024, Amazon Web Services, Inc. or its affiliates.), Privacy, Terms, and Cookie preferences.

## STEP 3: STATUS OF NEW VOLUME

Successfully created volume vol-08987266c40dcdec6.

Volumes (1/2) <a href="#">Info</a>											
<input type="button" value="Actions"/> <a href="#">Create volume</a>											
<input type="text" value="Q Search"/>											
Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone			
<input checked="" type="checkbox"/>	vol-08987266c40dcdec6	gp3	10 GiB	3000	125	-	2024/10/25 20:02 GMT+5:30	ap-south-1b			
<input type="checkbox"/>	vol-0c1732c56c919d78c	gp3	8 GiB	3000	125	snup-0875c14...	2024/10/25 19:53 GMT+5:30	ap-south-1b			

Volume ID: vol-08987266c40dcdec6

Details				Status checks	Monitoring	Tags
Volume ID	Size	Type	Volume status			
<a href="#">vol-08987266c40dcdec6</a>	<input type="button" value="10 GiB"/>	gp3	<a href="#">Okay</a>			
AWS Compute Optimizer Finding	Volume state	IOPS	Throughput			
<a href="#">Opt-in to AWS Compute Optimizer for recommendations   Learn more</a>	<a href="#">Available</a>	3000	125			
Fast snapshot restored	Availability Zone	Created	Multi-Attach enabled			
No	ap-south-1b	<input type="button" value="Fri Oct 25 2024 20:02:46 GMT+0530 (India Standard Time)"/>	No			
Attached resources	Outposts ARN					

## STEP 4: ATTACH CUSTOM VOLUME TO EC2 -> ACTIONS-> 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-08987266c40dcdec6](#)

Availability zone: ap-south-1b

Instance: [i-084508f984e0342e9](#)

Recommended device names for Linux (select one for root volume, /dev/sda1 for data volumes.)

[Never Linux kernels may rename your devices to /dev/nvme0 through /dev/nvme0p internally, even when the device name entered here \(and shown in the details\) is /dev/sdf through /dev/sdp.](#)

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

## STEP 5: LOG IN TO EC2 AS ROOT AND CHECK VOLUME IS ATTACHED OR NOT :

Command used to login: sudo su

Command used to check volume is attached or not : df -h

Command used to show all the ebs : lsblk

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

[root@ip-172-31-15-221 ~]# df -h
Filesystem      Size  Used Avail Block Mounted on
tmpfs           4.0M   4.0M     0  /dev
tmpfs           475M   475M     0  /dev/shm
tmpfs           190M   488K   189M  /tmp
/dev/xvda1      8.0G  6.4G  1.6G  /
tmpfs           475M   475M     0  /tmp
/dev/xvda2B    1.0M   1.0M     0  /boot/efi
tmpfs           95M     95M     0  /var/lib/amazon/1000
[root@ip-172-31-15-221 ~]# lsblk
NAME   MAJ:MIN RM  SIZE RO  MOUNTPOINTS
xvda    252:0    0   8G  0
└─xvda1 252:1    0   8G  0
xvda2  252:2    0   1M  0
└─xvda2B 252:3    0   1M  0
xvdf    252:8    0   18G  0
[root@ip-172-31-15-221 ~]#
```

i-08450bf984e0342e9 (22BCY10290\_SHIVANSH\_KUNTAL)  
PublicIP: 5.111.43.184 PrivateIP: 172.31.15.221

**STEP 6: To check whether file sys is available inside in ec2 or not :**

Command used to: file -s/dev/xvdf

Command used to Mount ebs and Create file system : mkfs -t xfs /dev/xvdf

```

root@ip-172-31-15-221:~# ec2-user$ ls -h
total 0
root@ip-172-31-15-221:~# ec2-user$ df -h
Filesystem      Size  Used Avail Mounted on
/dev/xvdf        8.0G   0B  8.0G  /app/volumn
tmpfs          479M   0B  479M  /dev/shm
tmpfs          196M  480K  195M  /run
tmpfs          6.0G  6.0G  0B   /run/lock
tmpfs          479M   0B  479M  /tmp
/dev/xvda1     1.0M  1.0M  0B   /boot/efi
tmpfs          95M   0B  95M   /run/user/1000
root@ip-172-31-15-221:~# ec2-user$ file -s /dev/xvdf
file: /dev/xvdf RM 8230 RD TFP MODELPNTS
root@ip-172-31-15-221:~# ec2-user$ fdisk -l
Disk /dev/xvda: 23.8 GB, 23.8 GB
Disk /dev/xvda1: 1.0 GB
Disk /dev/xvdf: 8.0 GB
Disk /dev/xvdb: 20.0 GB
Disk /dev/xvdc: 20.0 GB
Disk /dev/xvdd: 20.0 GB
Disk /dev/xvde: 20.0 GB
Disk /dev/xvdf: 8.0 GB
Disk /dev/xvdb1: 1.0 GB
Disk /dev/xvdc1: 1.0 GB
Disk /dev/xvdd1: 1.0 GB
Disk /dev/xvde1: 1.0 GB
Disk /dev/xvdf1: 8.0 GB
Disk /dev/xvdb2: 1.0 GB
Disk /dev/xvdc2: 1.0 GB
Disk /dev/xvdd2: 1.0 GB
Disk /dev/xvde2: 1.0 GB
root@ip-172-31-15-221:~# ec2-user$ file -s /dev/xvdf
file: /dev/xvdf RM 8230 RD TFP MODELPNTS
root@ip-172-31-15-221:~# ec2-user$ file -s /dev/xvdf
file: /dev/xvdf RM 8230 RD TFP MODELPNTS
root@ip-172-31-15-221:~# ec2-user$ mkfs -t xfs /dev/xvdf
meta-data=/dev/xvdf
  isize=512   agcount=4, agsize=655360 blks
  =         sectsz=512   attr=2, projid32bit=1
  =         os=3   rindex=1, square=0, snap=0
  =         name=0x98  blocks=2621440, imaxpct=20
  data   =         maxpct=0   width=0 blks
  naming  version=2   bsize=4096   amax=0, rmperm=1
  log    =         internal log   bsize=4096   blocks=16384, version=2
  =         sectors=512   sunit=0 blks, lazy-count=0
  realtime   excess   extra=0x96  blocks=0, rtextents=0
root@ip-172-31-15-221:~# ec2-user$ file -s /dev/xvdf
file: /dev/xvdf RM 8230 RD TFP MODELPNTS
root@ip-172-31-15-221:~# ec2-user$ 

```

i-08458bf984e0342e9 (22BCY10290\_SHIVANSH\_KUNTAL)  
PublicIP: 3.111.40.184 PrivateIP: 172.31.15.221

## STEP 7: Create a directory

Command used : mkdir -p /app/volumn/Mount /dev/xvdf  
/app/volumn

```

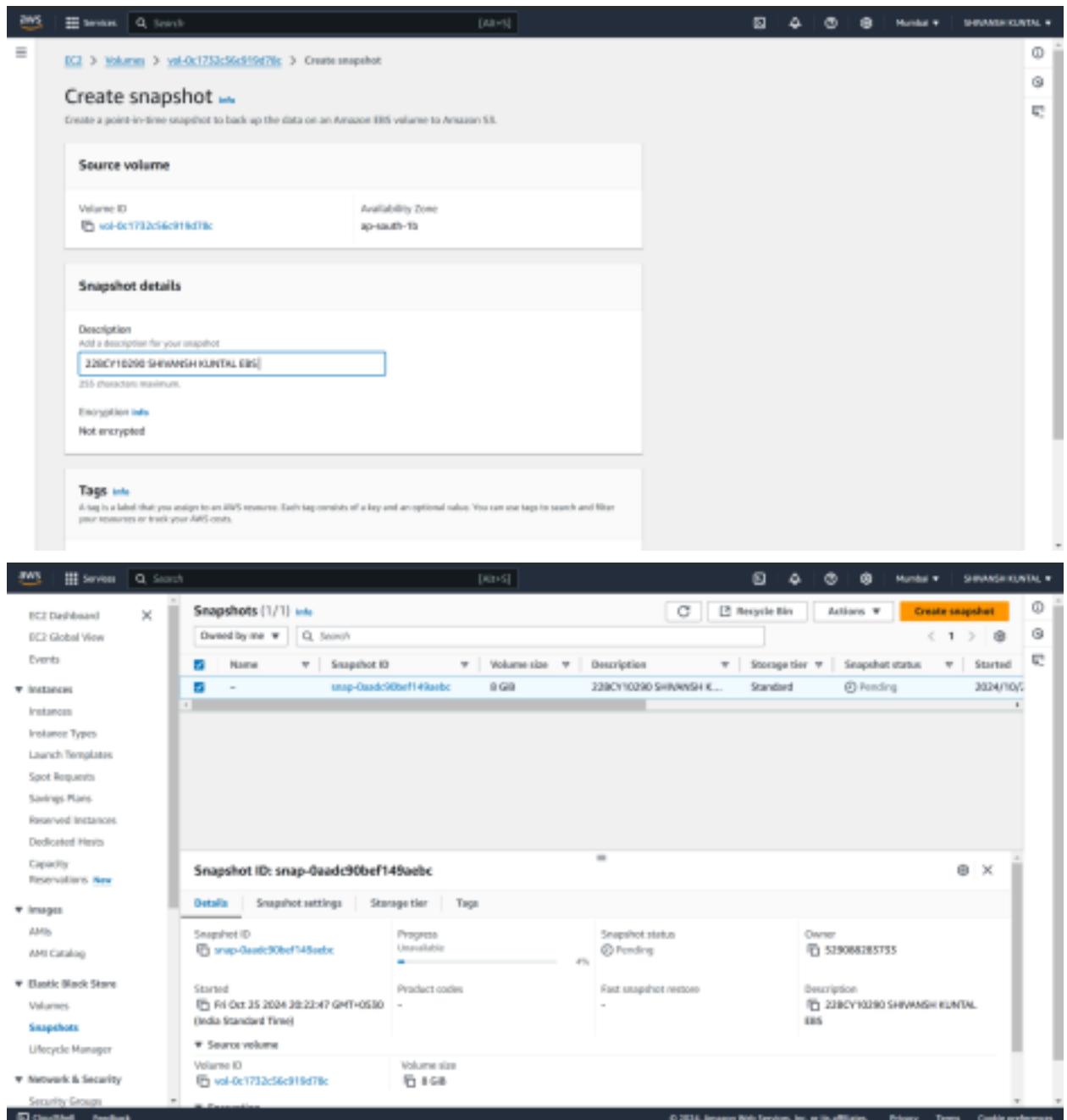
root@ip-172-31-15-221:~# ec2-user$ ls -h
total 0
root@ip-172-31-15-221:~# ec2-user$ mount -t xfs /dev/xvdf
meta-data=/dev/xvdf
  isize=512   agcount=4, agsize=655360 blks
  =         sectsz=512   attr=2, projid32bit=1
  =         os=3   rindex=1, square=0, snap=0
  =         name=0x98  blocks=2621440, imaxpct=20
  data   =         maxpct=0   width=0 blks
  naming  version=2   bsize=4096   amax=0, rmperm=1
  log    =         internal log   bsize=4096   blocks=16384, version=2
  =         sectors=512   sunit=0 blks, lazy-count=0
  realtime   excess   extra=0x96  blocks=0, rtextents=0
root@ip-172-31-15-221:~# ec2-user$ file -s /dev/xvdf
file: /dev/xvdf RM 8230 RD TFP MODELPNTS
root@ip-172-31-15-221:~# ec2-user$ file -s /app/volumn
root@ip-172-31-15-221:~# ec2-user$ mount /dev/xvdf /app/volumn
root@ip-172-31-15-221:~# df -h
Filesystem      Size  Used Avail Mounted on
/dev/xvdf        8.0G   0B  8.0G  /app/volumn
tmpfs          479M   0B  479M  /dev/shm
tmpfs          196M  480K  195M  /run
tmpfs          6.0G  6.0G  0B   /run/lock
tmpfs          479M   0B  479M  /tmp
/dev/xvda1     1.0M  1.0M  0B   /boot/efi
tmpfs          95M   0B  95M   /run/user/1000
root@ip-172-31-15-221:~# ec2-user$ 

```

i-08458bf984e0342e9 (22BCY10290\_SHIVANSH\_KUNTAL)  
PublicIP: 3.111.40.184 PrivateIP: 172.31.15.221

## STEP 8: CREATE SNAPSHOT :

## FROM ACTIONS : CREATE SNAPSHOT /CREATE VOLUME FROM SNAPSHOT



The image displays two screenshots from the AWS Management Console, specifically the EC2 service.

**Screenshot 1: Create snapshot (Step 8)**

This screenshot shows the "Create snapshot" wizard. The "Source volume" section shows a volume ID (vol-0c1732c56c918d78c) and an availability zone (ap-south-1a). The "Snapshot details" section includes a description field containing "22BCY10290 SHIVANSH KUNITAL EBS". The "Encryption" section indicates "Not encrypted". The "Tags" section allows adding tags to the snapshot.

**Screenshot 2: Snapshots (Step 9)**

This screenshot shows the "Snapshots (1/1)" list. It displays a single snapshot entry with the following details:

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started
-	snap-0aadc90bef149aebc	8 GiB	22BCY10290 SHIVANSH K... EBS	Standard	Pending	2024/10/25

The "Details" tab of the snapshot modal shows the following information:

Details	Snapshot settings	Storage tier	Tags
Snapshot ID: snap-0aadc90bef149aebc	Progress: Unavailable	Snapshot status: Pending	Owner: S29088285T55
Started: Fri Oct 25 2024 20:22:47 GMT+0530 (India Standard Time)	Product codes: -	Last snapshot restore: -	Description: 22BCY10290 SHIVANSH KUNITAL EBS
Source volume: Volume ID: vol-0c1732c56c918d78c	Volume size: 8 GiB		

## STEP 9: Delete Snapshot

Delete snap-0aadc90bef149aebc?

Are you sure that you want to delete snap-0aadc90bef149aebc?

To confirm deletion, type delete in the field.

Snapshot ID: snap-0aadc90bef149aebc

Details Snapshot settings Manage

Snapshot ID: snap-0aadc90bef149aebc

Product code: Amazon EBS

Status: Available (2024-10-25 08:22:47 GMT+0530)

Data Storage: 100 GiB

Source volume: vol-d8987280x45k0e6

Volume size: 10 GiB

Cancel Delete

<https://ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1>

<https://ap-south-1.console.aws.amazon.com/ec2/volumes?region=ap-south-1>

Volumes (1) [Info](#)

Search

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone
-	vol-d8987280x45k0e6	gp3	10 GiB	5000	125	snap-0aadc90bef149aebc	2024/10/25 08:23:03 EMT+9:00	ap-south-1

Fault tolerance for all volumes in this Region

Snapshot summary

Last updated on Fri, Oct 25, 2024, 08:26:47 PM (GMT+05:30)

Recently backed up volumes / Total # volumes: 0 / 1

Data Lifecycle Manager default policy for EBS Snapshots status: No default policy set up | Create policy

[Dashboard](#) [Feedback](#)

## 2. Amazon S3

**OBJECTIVE:** Bucket creation, creating URL and S3 Lifecycle Management

**STEP 1: GOTO SERVICES TAB->STORAGE->CREATE BUCKET**

S | Services | Q Search | [Alt+F] |

Storage

# Amazon S3

## Store and retrieve any amount of data from anywhere

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

Create bucket

### Pricing

With S3, there are no minimum fees. You only pay for what you use. Prices are based on the location of your S3 bucket.

Estimate your monthly bill using the [AWS Single Monthly Calculator](#)

[View pricing details](#)

### Resources

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## STEP 2: CREATE BUCKET TAB -> ENTER NAME

The screenshot shows the 'Create bucket' wizard in the AWS S3 console. The top navigation bar includes the AWS logo, 'Services' dropdown, search bar, and user information for 'SHRAVANSH KUMAR'. The main title is 'Create bucket'. Below it, a sub-header says 'Buckets are containers for data stored in S3.' The first step, 'General configuration', is active. It shows the 'AWS Region' set to 'Asia Pacific (Mumbai) ap-south-1'. The 'Bucket name' field contains the value '22BCY102905SHIVANSHKUMARAL'. A note below states: 'Bucket name must be unique within the global namespace and follow the bucket naming rules. See rules for bucket naming.' There is an optional 'Copy settings from existing bucket' section with a 'Choose bucket' button and a placeholder 'Format: s3://bucket/prefix'. The second step, 'Object Ownership', is shown below. It has two options: 'ACLs disabled (recommended)' (selected) and 'ACLs enabled'. The 'ACLs disabled' option notes that all objects are owned by the account and access is controlled via policies. The 'ACLs enabled' option notes that objects can be owned by other accounts and access is controlled via ACLs. The bottom of the page includes links for 'CloudShell', 'Feedback', and copyright information: '© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences'.

General configuration

AWS Region  
Asia Pacific (Mumbai) ap-south-1

Bucket name [Info](#)  
22BCY102905SHIVANSHKUMARAL

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - optional  
Only the bucket settings in the following configuration are copied.

Choose bucket

Format: s3://bucket/prefix

Object Ownership [Info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

**ACLs disabled (recommended)**  
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

**ACLs enabled**  
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

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## STEP 3: DISABLE ACL AND PUBLIC ACCESS



## STEP 4: BUCKET VERSIONING AND DEFAULT ENCRYPTION



**STEP 5: CREATED BUCKET SUCCESSFULLY**



**STEP 6: UPLOAD FILE IN BUCKET**

**STEP 7: CONFIGURE STORAGE CLASS**

**STEP 8: UPLOAD FILE**

**STEP 9: DETAILS OF UPLOAD STATUS AND IMAGE**

**IMAGE uploaded :- "sig.jpg"**



**STEP 10: ENABLE PUBLIC ACCESS TO VIEW WITH PUBLIC URL**

**STEP 11: CREATE BUCKET POLICY**

**STEP 12: ACCESSING IMAGE THROUGH PUBLIC URL**



**STEP 13: VERSION CONTROL**



**New “ sig.jpg” file with same name**



**STEP 14: LIFECYCLE MANAGEMENT**



## STEP 15: DELETE FILES



## STEP 16: DELETE BUCKET



