

1. Launch and Connect to an EC2 Linux Instance

The screenshot shows the AWS EC2 Dashboard for the US East (N. Virginia) Region. On the left, a sidebar lists various services like Instances, Images, and Network & Security. The main area displays 'Resources' info with counts for Instances (running), Auto Scaling Groups, Dedicated Hosts, Elastic IPs, Instances, Key pairs, Load balancers, Placement groups, Security groups, Snapshots, and Volumes. A central box titled 'Launch instance' contains a large orange 'Launch instance' button and a smaller 'Migrate a server' button. Below these are notes about launching instances in the US East (N. Virginia) Region. To the right, there's a 'Service health' section with a link to the AWS Health Dashboard, a 'Zones' table showing 'us-east-1a' and 'use1-az6', and an 'Explore AWS' section with links to Compute Cost Optimization Training and information about Graviton-based instances.

The screenshot shows the 'Launch an instance' wizard, Step 1: Summary. It starts with a 'Name and tags' section where 'InstanceEq' is entered into the 'Name' field. Below it is an 'Application and OS Images (Amazon Machine Image)' section with a search bar and a list of operating systems: Amazon, macOS, Ubuntu, Windows, Red Hat, and SUSE. On the right, a summary table provides details: Number of instances (1), Software Image (AMI) set to 'Amazon Linux 2023 AMI 2023.1.2...', Virtual server type (instance type) set to 't2.micro', Firewall (security group) set to 'New security group', and Storage (volumes) set to '1 volume(s) - 8 GiB'. At the bottom are 'Cancel', 'Launch instance' (in orange), and 'Review commands' buttons.

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

Services Search [Alt+S] N. Virginia Corestack_Role/sushmitha.bs2_mphas@2235-8360-8918

Volume 1 (AMI Root) (Custom)

Storage type [Info](#) Device name - required [Info](#) Snapshot [Info](#)
EBS /dev/xvda snap-070e3553724e5756e

Size (GiB) [Info](#) Volume type [Info](#) IOPS [Info](#)
30 gp3 3000

Delete on termination [Info](#) Encrypted [Info](#) KMS key [Info](#)
Yes Not encrypted Select
KMS keys are only applicable when encryption is set on this volume.

Throughput [Info](#)
125

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage X

Add new volume

File systems Show details

Advanced details [Info](#)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Amazon Linux 2023 AMI 2023.1.2... [read more](#)
ami-04cb4cat8879756f

Virtual server type (Instance type)
t2.micro

Firewall (security group)
New security group

Storage (volumes)
1 volume(s) - 30 GiB

Cancel Launch instance Review commands

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

Services Search [Alt+S] N. Virginia Corestack_Role/sushmitha.bs2_mphas@2235-8360-8918

EC2 > Instances > Launch an instance

Success Successfully initiated launch of instance (i-0ad9991fe459492c9)

Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup" 1 2 3 4 5 6

Create billing and free tier usage alerts
To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.
Create billing alerts

Connect to your instance
Once your instance is running, log into it from your local computer.
Connect to instance Learn more

Connect an RDS database
Configure the connection between an EC2 instance and a database to allow traffic flow between them.
Connect an RDS database Create a new RDS database Learn more

Create EBS snapshot policy
Create a policy that automates the creation, retention, and deletion of EBS snapshots.
Create EBS snapshot policy

Manage detailed monitoring

Create Load Balancer

Create AWS budget

Manage CloudWatch alarms

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateLifecyclePolicy;policyType=EBS_SNAPSHOT_MANAGEMENT

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AWS Services Search https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:instanceId=i-0ad9991fe459492c9 N. Virginia Corestack_Role/sushmitha.bs2_mphas@2235-8360-8918

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Instances (1/1) Info Find instance by attribute or tag (case-sensitive) Instance ID = i-0ad9991fe459492c9 X Clear filters

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
InstanceEg	i-0ad9991fe459492c9	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-54-2-

Instance: i-0ad9991fe459492c9 (InstanceEg)

Details Security Networking Storage Status checks Monitoring Tags

Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
i-0ad9991fe459492c9 (InstanceEg)	54.211.137.2 [open address]	172.31.32.13
IPv6 address	Instance state	Public IPv4 DNS
-	Running	ec2-54-211-137-2.compute-1.amazonaws.com [open address]
Hostname type	Private IP DNS name (IPv4 only)	
IP name: ip-172-31-32-13.ec2.internal	ip-172-31-32-13.ec2.internal	

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AWS Services Search https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0ad9991fe459492c9&osUser=ec2-user®ion=us-e... N. Virginia Corestack_Role/sushmitha.bs2_mphas@2235-8360-8918

Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/ 5 package(s) needed for security, out of 36 available Run "sudo yum update" to apply all updates. [ec2-user@ip-172-31-32-13 ~]\$

i-0ad9991fe459492c9 (InstanceEg)

PublicIPs: 54.211.137.2 PrivateIPs: 172.31.32.13

CloudShell Feedback

2. Change the Volume Size of an Instance.

The screenshot shows two screenshots of the AWS Cloud Console interface.

Top Screenshot: Create volume

This screenshot shows the "Create volume" wizard. The "Volume settings" section is visible, with the following configuration:

- Volume type: General Purpose SSD (gp2)
- Size (GiB): 2
- IOPS: 100 / 3000
- Throughput (MiB/s): Not applicable
- Availability Zone: us-east-1a
- Snapshot ID - optional: Don't create volume from a snapshot
- Encryption: Info

Bottom Screenshot: Volumes list

This screenshot shows the "Volumes" list page. It displays one volume entry:

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
-	vol-0389674b74dec130d	gp2	8 GiB	100	-	snap-0380d6...	2023/09

A message at the bottom of the list says: "Select a volume above".

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

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Images AMIs AMI Catalog

Elastic Block Store Volumes Snapshots Lifecycle Manager

CloudShell Feedback

Volumes (1/2) Info

Name	Volume ID	Type	Size	IOPS	Throughput	Snaps
-	vol-0389674b74dec130d	gp2	8 GiB	100	-	sna
<input checked="" type="checkbox"/>	vol-0f801d734e5630983	gp2	2 GiB	100	-	-

Actions Create volume Modify volume Create snapshot Create snapshot lifecycle policy Delete volume AT+ Attach volume AT+ Detach volume Force detach volume Manage auto-enabled I/O Manage tags Fault injection

Volume ID: vol-0f801d734e5630983

Details Status checks Monitoring Tags

Volume ID vol-0f801d734e5630983	Size 2 GiB	Type gp2	Volume status Okay
AWS Compute Optimizer finding This user is not authorized to call AWS Compute Optimizer. Retry	Volume state Available	IOPS 100	Throughput -
Encryption Not encrypted	KMS key ID -	KMS key alias -	KMS key ARN -
Fast snapshot restored	Snapshot	Availability Zone	Created

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https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AttachVolume:volId=vol-0f801d734e5630983

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-0f801d734e5630983

Availability Zone
us-east-1a

Instance
i-0ad9991fe459492c9

Device name
/dev/sdf

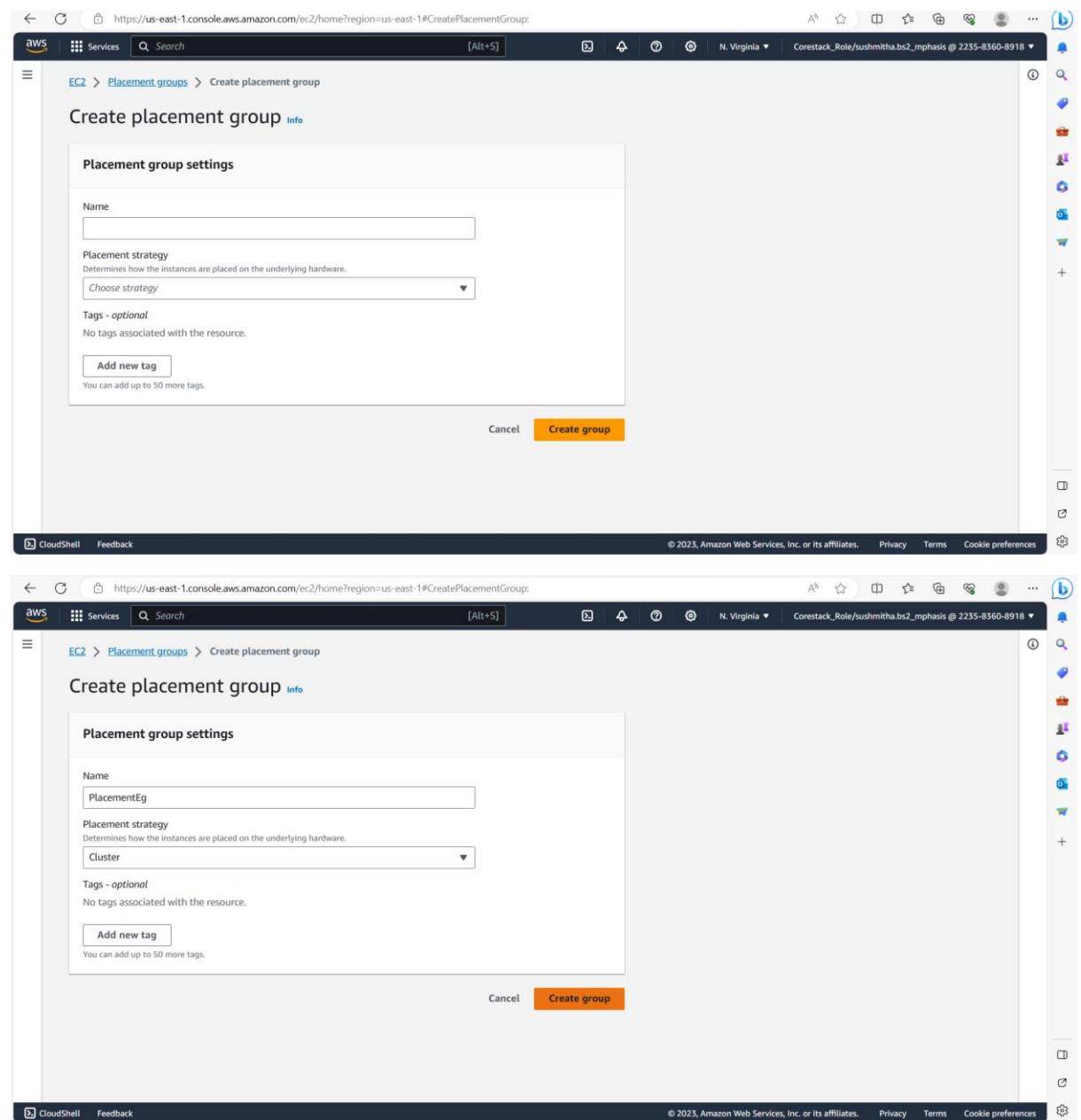
Recommended device names for Linux: /dev/sda1 for root volume, /dev/sd[1-p] for data volumes.

ⓘ Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvd internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel Attach volume

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3. Launch an Instance in a Placement Group



The screenshot shows the 'Create placement group' form in the AWS CloudWatch Metrics console. The 'Placement group settings' section contains the following fields:

- Name:** An input field containing the placeholder text "PlacementEg".
- Placement strategy:** A dropdown menu set to "Cluster".
- Tags - optional:** A note stating "No tags associated with the resource." followed by a "Add new tag" button.

At the bottom right of the form are "Cancel" and "Create group" buttons. The "Create group" button is highlighted with a yellow background.

← ⏪ https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#PlacementGroups: [Alt+S]

N. Virginia Corestack_Role/sushmitha.bs2_mphasis @ 2235-8360-8918

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Events

Instances

Instance Types

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Spot Requests

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Reserved Instances

Dedicated Hosts

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Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

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Placement group created successfully.

Placement groups (4)

Group name	Group Id	Strategy	State
PlacementEg	pg-0dadd72ff3b539b64	cluster	available
webserver-cluster-pg	pg-066c89085bd8e1d5b	cluster	available
webserver-partition-pg	pg-07446e6c1cb474734	partition	available
webserver-spread-pg	pg-0710989591d9b4df0	spread	available

Actions Create placement group

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Group name	Group Id	Strategy	State
PlacementEg	pg-0dadd72ff3b539b64	cluster	available
webserver-cluster-pg	pg-066c89085bd8e1d5b	cluster	available
webserver-partition-pg	pg-07446e6c1cb474734	partition	available
webserver-spread-pg	pg-0710989591d9b4df0	spread	available

4. Create an EBS Volume

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

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](#)
2

IOPS [Info](#)
100 / 3000

Throughput (MiB/s) [Info](#)
Not applicable

Availability Zone [Info](#)
us-east-1a

Snapshot ID - optional [Info](#)
Don't create volume from a snapshot

Encryption [Info](#)
Use Amazon KMS encryption to store data at rest for your EBS volumes associated with your EC2 instances.

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

Volumes (1) [Info](#)

Search

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
-	vol-0389674b74dec130d	gp2	8 GiB	100	-	snap-0380d6...	2023/09

Select a volume above

CloudShell Feedback

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

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Instances Instances 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

CloudShell Feedback

Volumes (1/2) Info

Name	Volume ID	Type	Size	IOPS	Throughput	Snaps
-	vol-0389674b74dec130d	gp2	8 GiB	100	-	sna
<input checked="" type="checkbox"/>	vol-0f801d734e5630983	gp2	2 GiB	100	-	-

Actions Create volume Modify volume Create snapshot Create snapshot lifecycle policy Delete volume AT+ Attach volume AT+ Detach volume Force detach volume Manage auto-enabled I/O Manage tags Fault injection

Volume ID: vol-0f801d734e5630983

Details Status checks Monitoring Tags

Volume ID vol-0f801d734e5630983	Size 2 GiB	Type gp2	Volume status Okay
AWS Compute Optimizer finding This user is not authorized to call AWS Compute Optimizer. Retry	Volume state Available	IOPS 100	Throughput -
Encryption Not encrypted	KMS key ID -	KMS key alias -	KMS key ARN -
Fast snapshot restored	Snapshot	Availability Zone	Created

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https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AttachVolume:volId=vol-0f801d734e5630983

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-0f801d734e5630983

Availability Zone
us-east-1a

Instance
i-0ad9991fe459492c9

Device name
/dev/sdf

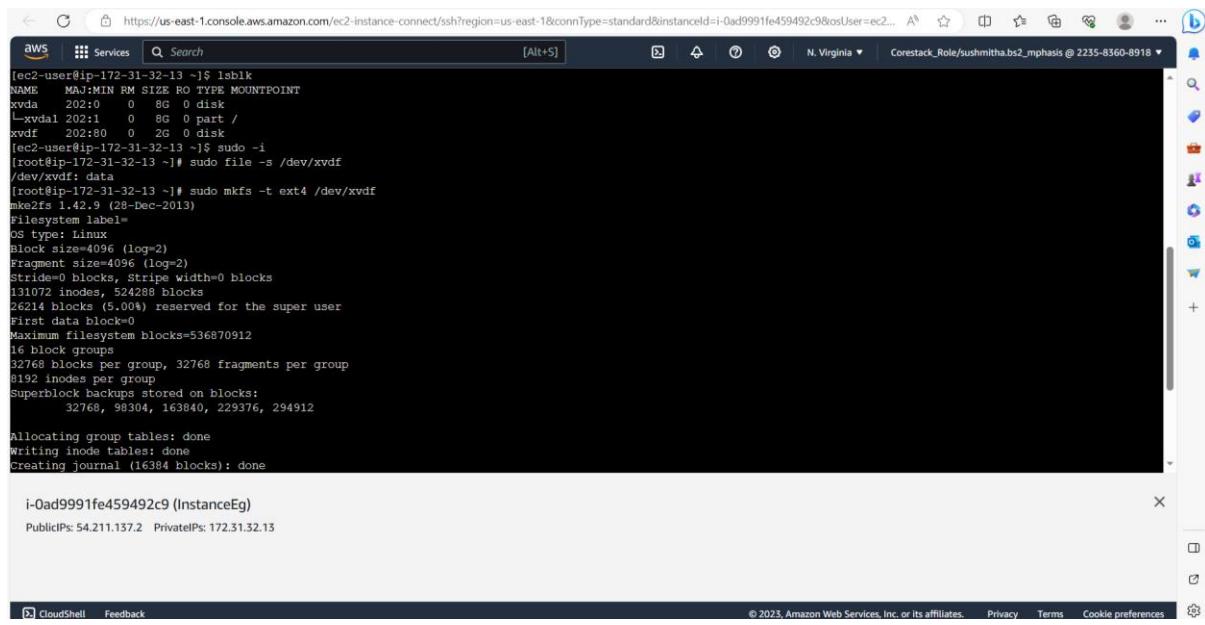
Recommended device names for Linux: /dev/sda1 for root volume, /dev/sd[1-p] for data volumes.

ⓘ Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvd internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel Attach volume

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5. Format and Mount an EBS Volume.

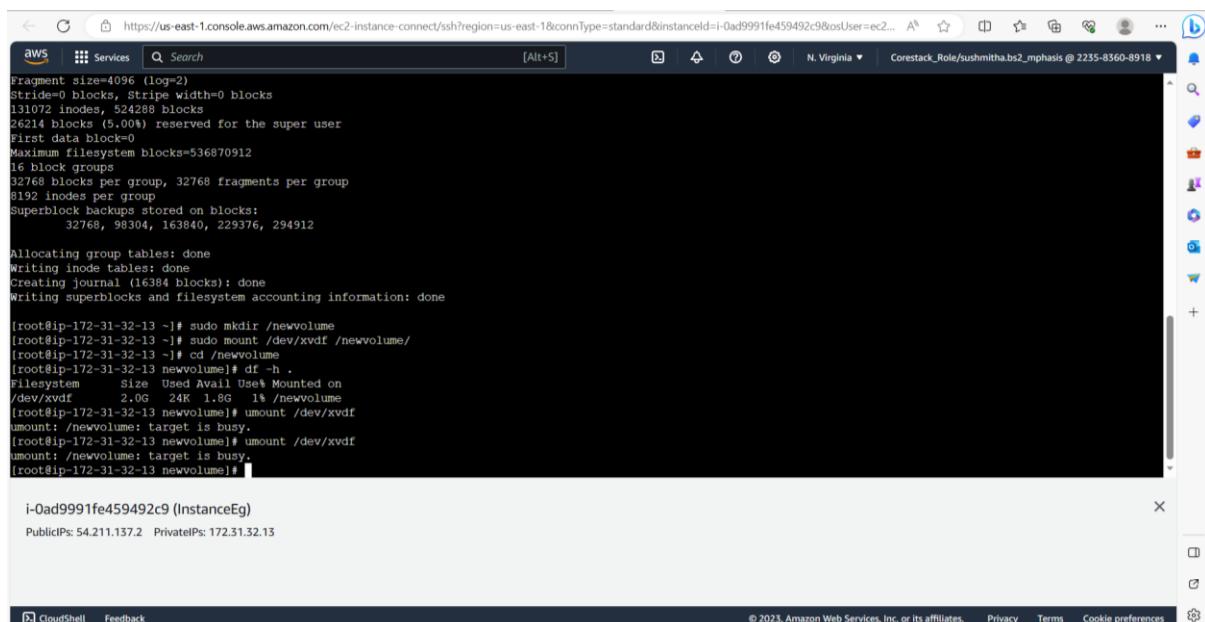


```
[ec2-user@ip-172-31-32-13 ~]$ lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda   202:0    0   8G  0 disk
└─xvda1 202:1    0   8G  0 part /
xvdf   202:80   0   2G  0 disk
[ec2-user@ip-172-31-32-13 ~]$ sudo file -s /dev/xvdf
/dev/xvdf: data
[root@ip-172-31-32-13 ~]# sudo mkfs -t ext4 /dev/xvdf
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
131072 inodes, 524288 blocks
26214 blocks (5.0%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done

[root@ip-172-31-32-13 ~]#
```

i-0ad9991fe459492c9 (InstanceEg)
PublicIPs: 54.211.137.2 PrivateIPs: 172.31.32.13



```
[root@ip-172-31-32-13 ~]# lsblk
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
131072 inodes, 524288 blocks
26214 blocks (5.0%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912

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

[root@ip-172-31-32-13 ~]# sudo mkdir /newvolume
[root@ip-172-31-32-13 ~]# sudo mount /dev/xvdf /newvolume/
[root@ip-172-31-32-13 ~]# cd /newvolume
[root@ip-172-31-32-13 newvolume]# df -h .
Filesystem      Size  Used Avail Use% Mounted on
/dev/xvdf        2.0G  24K  1.8G  1% /newvolume
[root@ip-172-31-32-13 newvolume]# umount /dev/xvdf
umount: /newvolume: target is busy.
[root@ip-172-31-32-13 newvolume]# umount /dev/xvdf
umount: /newvolume: target is busy.
[root@ip-172-31-32-13 newvolume]#
```

i-0ad9991fe459492c9 (InstanceEg)
PublicIPs: 54.211.137.2 PrivateIPs: 172.31.32.13

6. Detach an EBS Volume.

The screenshot shows the AWS EC2 Volumes page. A success message at the top says "Successfully created volume vol-08d6caf7061432f22.". The main table lists three volumes:

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshots
-	vol-0389674b74dec130d	gp2	8 GiB	100	-	-
<input checked="" type="checkbox"/>	vol-0f801d734e5630983	gp2	2 GiB	100	-	-
-	vol-08d6caf7061432f22	gp2	3 GiB	100	-	-

The Actions menu on the right includes options like Modify volume, Create snapshot, Create snapshot lifecycle policy, Delete volume, Attach volume, Detach volume (which is highlighted), Force detach volume, Manage auto-enabled I/O, Manage tags, and Fault injection.

The screenshot shows the AWS EC2 Volumes page with the same three volumes listed. A confirmation dialog box titled "Detach vol-0f801d734e5630983?" is displayed in the center. The dialog contains the following text:

After you detach a volume, you might still be charged for volume storage. If you no longer need the volume, delete it to stop incurring charges.

Are you sure that you want to detach volume vol-0f801d734e5630983?

Cancel **Detach**

The volume details shown in the dialog are identical to the ones in the main table: Volume ID vol-0f801d734e5630983, Size 2 GiB, Type gp2, Volume state In-use, IOPS 100, Throughput -, and Created 2023/09/15 21:17 GMT+.

7. Delete an EBS Volume.

The screenshot shows the AWS EC2 Volumes page. A success message at the top says "Successfully detached volume." Below is a table of volumes:

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Actions
-	vol-0389674b74dec130d	gp2	8 GiB	100	-	snap-0380d6...	Modify volume
-	vol-0f801d734e5630983	gp2	2 GiB	100	-	-	Create snapshot
<input checked="" type="checkbox"/>	vol-08d6caf7061432f22	gp2	3 GiB	100	-	-	Delete volume

Details for Volume ID: vol-08d6caf7061432f22:

Details	Status checks	Monitoring	Tags
Volume ID: vol-08d6caf7061432f22	Size: 3 GiB	Type: gp2	Volume status: Okay
AWS Compute Optimizer finding: This user is not authorized to call AWS Compute Optimizer.	Volume state: Available	IOPS: 100	Throughput: -
Encryption: Not encrypted	KMS key ID: -	KMS key alias: -	KMS key ARN: -
Lifecycle Manager: Fast snapshot restored	Snapshot: -	Availability Zone: -	Created: -

The screenshot shows the AWS EC2 Volumes page with a delete confirmation dialog over it. The dialog asks if you want to delete the volume.

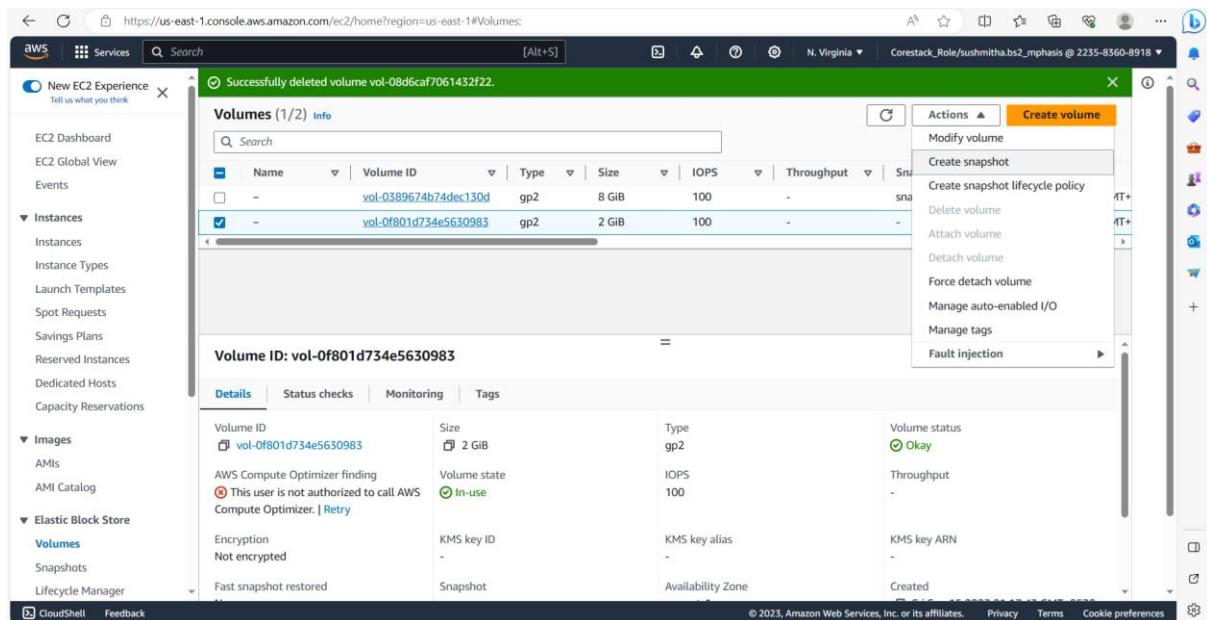
Delete vol-08d6caf7061432f22?

After you delete a volume, its data is permanently deleted and the volume can no longer be attached to an instance.

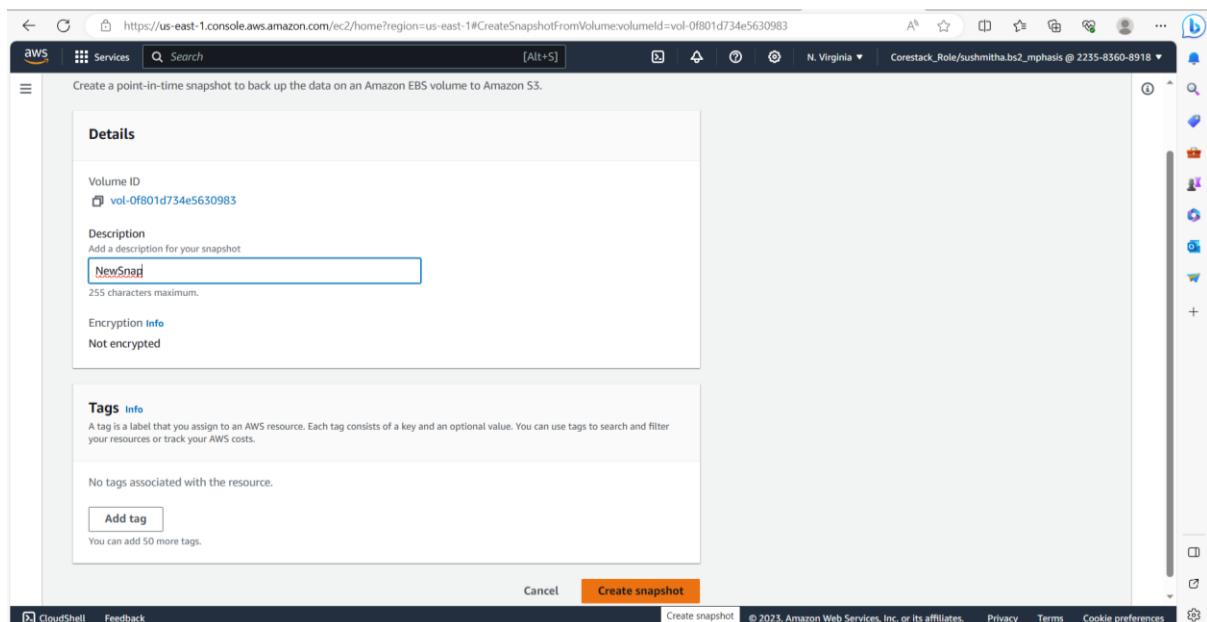
Are you sure that you want to delete vol-08d6caf7061432f22?

Cancel **Delete**

8. Create an EBS Snapshot.



The screenshot shows the AWS EC2 Volumes page. A context menu is open over the selected volume (vol-0f801d734e5630983). The 'Create snapshot' option is highlighted in the menu.



The screenshot shows the 'Create a point-in-time snapshot' wizard. The 'Details' step is displayed. The 'Volume ID' is set to vol-0f801d734e5630983. The 'Description' field contains 'NewSnap'. The 'Encryption' setting is 'Not encrypted'. The 'Tags' section is empty. At the bottom, there is a 'Create snapshot' button.

https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#ManageFastSnapshotRestore:snapshotId=snap-00b595c082347120e

EC2 > Snapshots > snap-00b595c082347120e > Manage fast snapshot restore

Manage fast snapshot restore [Info](#)

Snapshots that are enabled for fast snapshot restore enable you to restore volumes that are fully initialized at creation.

Snapshot	
Snapshot ID	Description
snap-00b595c082347120e	Newsnap

Fast snapshot restore settings (6)

	Availability Zone	Current status	Enable	Disable
<input type="checkbox"/>	us-east-1a	Disabled	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	us-east-1b	Disabled	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	us-east-1c	Disabled	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	us-east-1d	Disabled	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	us-east-1e	Disabled	<input type="radio"/>	<input checked="" type="radio"/>
<input type="checkbox"/>	us-east-1f	Disabled	<input type="radio"/>	<input checked="" type="radio"/>

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9. View snapshot.

The screenshot shows the AWS EC2 Snapshots page. The URL is https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#SnapshotDetails:snapshotId=snap-00b595c082347120e. The page displays a single snapshot named "snap-00b595c082347120e".

Snapshot ID	Volume size	Progress	Snapshot status
snap-00b595c082347120e	2 GB	Available (100%)	Completed
Owner	Volume ID	Started	Product codes
223583608918	vol-0f801d734e5630983	Fri Sep 15 2023 22:22:19 GMT+0530 (India Standard Time)	-
Encryption	KMS key ID	KMS key alias	KMS key ARN
Not encrypted	-	-	-
Fast snapshot restore	Description		
-	Newsnap		

Below the table, there are three tabs: Permissions, Storage tier, and Tags. The Permissions tab is selected, showing "Snapshot share permissions" set to "Private". A "Modify permissions" button is available. The "Shared accounts (0)" section indicates that the snapshot is not shared with any other AWS accounts. An "Add account ID" button is present.

10. Initialize a Volume Restored from a Snapshot on Linux.

The screenshot shows the AWS EC2 Snapshots page. A context menu is open over a volume named "snap-00b595c082347120e". The menu options include:

- Create volume from snapshot
- Create image from snapshot
- Copy snapshot
- Modify permissions
- Manage fast snapshot restore
- Archive snapshot
- Restore snapshot from archive
- Change restore period

The main page displays the following details for the volume:

Snapshot ID	Volume size	Progress
snap-00b595c082347120e	2 GiB	Available (100%)
Owner	Volume ID	Started
223583608918	vol-0f801d734e5630983	Fri Sep 15 2023 22:22:19 GMT+0530 (India Standard Time)
Encryption	KMS key ID	KMS key alias
Not encrypted	-	-
Fast snapshot restore	Description	
-	Newsnap	

Below the table, there are tabs for Permissions, Storage tier, and Tags. Under Permissions, it says "Snapshot share permissions Private" and "The snapshot is shared only with AWS accounts that you specified". Under Shared accounts, there is a button to "Add account ID".

The screenshot shows the "Create volume from snapshot" wizard. It has several configuration sections:

- Throughput (MiB/s): Info - Not applicable
- Availability Zone: Info - us-east-1a
- Fast snapshot restore: Info - Not enabled for selected snapshot
- Encryption: Info - Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances. A checkbox "Encrypt this volume" is present.
- 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. It shows "No tags associated with the resource" and a "Add tag" button. A note says "You can add 50 more tags."

At the bottom right, there are "Cancel" and "Create volume" buttons.

Successfully created volume vol-01dca14eab902a8ca.

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started
-	snap-02a8c9593895f260f	2 GiB	NewSnap	Standard	Completed	2023/09/15 22:22
-	snap-00b595c082347120e	2 GiB	Newsnap	Standard	Completed	2023/09/15 22:22

Select a snapshot above.

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11. Create a Bucket

The screenshot shows the AWS S3 console homepage. At the top, there's a search bar and a 'Create a bucket' button. Below the header, there's a large 'Amazon S3' logo with the tagline 'Store and retrieve any amount of data from anywhere'. A sub-section titled 'How it works' features a video thumbnail for 'Introduction to Amazon S3'. To the right, there's a 'Pricing' section with information about no minimum fees and a link to the Simple Monthly Calculator. At the bottom, there are links for CloudShell, Feedback, and cookie preferences.

The screenshot shows the 'Create bucket' configuration page. The URL is https://s3.console.aws.amazon.com/s3/bucket/create?region=us-east-1. The page has a breadcrumb navigation: Amazon S3 > Buckets > Create bucket. It contains two main sections: 'General configuration' and 'Object Ownership'. In 'General configuration', there's a 'Bucket name' field with 'BucketEg' entered, a 'Bucket Region' dropdown set to 'US East (N. Virginia) us-east-1', and a 'Choose bucket' button. In 'Object Ownership', there are two options: 'ACLs disabled (recommended)' (selected) and 'ACLs enabled'. The bottom of the page includes standard AWS footer links for CloudShell, Feedback, and cookie preferences.

https://s3.console.aws.amazon.com/s3/bucket/create?region=us-east-1

Add tag

Default encryption [Info](#)
Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption type [Info](#)
 Server-side encryption with Amazon S3 managed keys (SSE-S3)
 Server-side encryption with AWS Key Management Service keys (SSE-KMS)
 Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)
Secure your objects with two separate layers of encryption. For details on pricing, see [DSSE-KMS pricing](#) on the Storage tab of the [Amazon S3 pricing page](#).

Bucket Key
Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#)
 Disable
 Enable

Advanced settings

After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.

Cancel **Create bucket**

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https://s3.console.aws.amazon.com/s3/buckets?region=us-east-1

Successfully created bucket "mybucket852"
To upload files and folders, or to configure additional bucket settings choose [View details](#).

View details

Amazon S3 > Buckets

Account snapshot
Last updated: Sep 8, 2023 by Storage Lens. Metrics are generated every 24 hours. [Learn more](#)

Total storage Object count Average object size You can enable advanced metrics in the "default-account-dashboard" configuration.
16.9 MB 1 16.9 MB

Buckets (1) [Info](#)
Buckets are containers for data stored in S3. [Learn more](#)

Name	AWS Region	Access	Creation date
mybucket852	US East (N. Virginia) us-east-1	Objects can be public	September 15, 2023, 22:33:08 (UTC+05:30)

Copy ARN Empty Delete Create bucket

Table Selection Select mybucket852

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12. Delete S3 bucket.

The screenshot shows the AWS S3 console at <https://s3.console.aws.amazon.com/s3/buckets?region=us-east-1>. A green banner at the top indicates "Successfully created bucket 'mybucket852'". Below it, the "Account snapshot" section shows total storage of 16.9 MB, one object, and an average object size of 16.9 MB. A note says "You can enable advanced metrics in the 'default-account-dashboard' configuration." The "Buckets (1) info" section lists "mybucket852" with details: AWS Region: US East (N. Virginia) us-east-1, Access: Objects can be public, Creation date: September 15, 2023, 22:33:08 (UTC+05:30). Action buttons include Copy ARN, Empty, Delete, and Create bucket.

The screenshot shows the AWS S3 console at <https://s3.console.aws.amazon.com/s3/bucket/mybucket852/delete?region=us-east-1>. The path is Amazon S3 > Buckets > mybucket852 > Delete bucket. A yellow warning box lists risks of deleting a bucket. Below it, a "Delete bucket 'mybucket852'?" dialog asks to enter the bucket name to confirm deletion. The input field contains "mybucket852". Action buttons are Cancel and Delete bucket.

13. Set the Storage Class of an Object.

The screenshot shows the AWS S3 console interface. The top navigation bar includes 'Services' and a search bar. Below it, the breadcrumb navigation shows 'Amazon S3 > Buckets > mybucket852'. The main content area is titled 'mybucket852' with an 'Info' link. A horizontal menu bar below the title includes 'Objects', 'Properties', 'Permissions', 'Metrics', 'Management', and 'Access Points'. The 'Actions' dropdown is currently active, with the 'Upload' button highlighted in orange. A search bar labeled 'Find objects by prefix' is present. A table header for 'Objects (0)' lists columns: Name, Type, Last modified, Size, and Storage class. A message below the table states 'No objects' and 'You don't have any objects in this bucket.' At the bottom of the page, there are links for 'CloudShell', 'Feedback', and copyright information: '© 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences'.

The second part of the screenshot shows the 'Upload' dialog box. It has a 'Find by name' search bar and a table header with columns: Name, Folder, Type, and Size. Under the 'Destination' section, the 'Destination' field is set to 's3://mybucket852'. The 'Destination details' section contains two expandable sections: 'Bucket Versioning' (which is enabled) and 'Object Lock' (which is disabled). Below these are sections for 'Permissions' (Grant public access and access to other AWS accounts) and 'Properties' (Specify storage class, encryption settings, tags, and more). At the bottom right of the dialog is an 'Upload' button.

https://s3.console.aws.amazon.com/s3/buckets/mybucket852?region=us-east-1&tab=objects

Amazon S3 > Buckets > mybucket852

mybucket852 Info

Objects Properties Permissions Metrics Management Access Points

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 Inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name	Type	Last modified
Kubernetes.docx	docx	September 15, 2023 (UTC+05:30)

Actions ▾ Create folder Upload

Copy Move Initialize restore Query with S3 Select

Show versions Edit actions Rename object

Edit storage class Edit server-side encryption Edit metadata Edit tags Make public using ACL

180.2 KB Standard

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https://s3.console.aws.amazon.com/s3/buckets/mybucket852/object/edit_storage_class?region=us-east-1&showversions=false

aws Services Search [Alt+S]

Storage class

Amazon S3 offers a range of storage classes designed for different use cases. [Learn more](#) or see [Amazon S3 pricing](#)

Storage class	Designed for	Availability Zones	Min storage duration	Cost
Standard	Frequently accessed data (more than once a month) with milliseconds access	≥ 3	-	-
Intelligent-Tiering	Data with changing or unknown access patterns	≥ 3	-	-
Standard-IA	Infrequently accessed data (once a month) with milliseconds access	≥ 3	30 days	1
One Zone-IA	Recreatable, infrequently accessed data (once a month) stored in a single Availability Zone with milliseconds access	1	30 days	1
Glacier Instant Retrieval	Long-lived archive data accessed once a quarter with instant retrieval in milliseconds	≥ 3	90 days	1
Glacier Flexible Retrieval (formerly Glacier)	Long-lived archive data accessed once a year with retrieval of minutes to hours	≥ 3	90 days	-

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14. Create an IAM User

The screenshot shows the AWS S3 console interface. A search bar at the top contains the query 'iam'. Below the search bar, a sidebar on the left lists services like Amazon S3, mybucket, and Objects. The main content area displays search results for 'iam' under the 'Services' category. The first result is 'IAM' (Manage access to AWS resources), which is highlighted. Other results include 'IAM Identity Center' (Manage workforce user access to multiple AWS accounts and cloud applications), 'Resource Access Manager' (Share AWS resources with other accounts or AWS Organizations), and 'AWS App Mesh' (Easily monitor and control microservices). Below the 'Services' section, there is a 'Features' section with a single item: 'Groups' (IAM feature).

The screenshot shows the AWS IAM Dashboard. The left sidebar includes sections for 'Identity and Access Management (IAM)', 'Dashboard', 'Access management' (User groups, Users, Roles, Policies, Identity providers, Account settings), and 'Access reports' (Access analyzer, Archive rules, Analyzers, Settings, Credential report, Organization activity, Service control policies (SCPs)). The main content area features a 'Security recommendations' section with two items: 'Add MFA for root user' and 'Attention: Extended Deadline for Updating Your Access Permissions - December 11, 2023'. Below this is an 'IAM resources' section showing counts for User groups (1), Users (1), Roles (13), Policies (2), and Identity providers (0). To the right, there are two panels: 'AWS Account' (Account ID: 223583608918, Account Alias: Create, Sign-in URL: https://223583608918.sigin.aws.amazon.com/console) and 'Tools' (Policy simulator, Web identity federation playground).

https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-1#users

Identity and Access Management (IAM)

IAM > Users

Users (1) Info

An IAM user is an identity with long-term credentials that is used to interact with AWS in an account.

User name	Path	Group	Last activity	MFA	Password age	Console last s
corestack-8797c	/	0	Access denied	-	1121 days	-

Search

Create user

CloudShell Feedback

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https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-1#users/create

Step 2 Set permissions

Step 3 Review and create

Step 4 Retrieve password

User details

User name: Sushmitha

Provide user access to the AWS Management Console - optional

Console password:

- Autogenerated password
- Custom password (selected)

Custom password: (must be at least 6 characters long)

Show password

Users must create a new password at next sign-in - Recommended

If you are creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keypairs, you can generate them after you create this IAM user. [Learn more](#)

Cancel Next

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https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-1#/users/create

Step 2 Set permissions

Step 3 Review and create

Step 4 Retrieve password

User details

User name	Sushmitha	Console password type	Custom password
			Require password reset Yes

Permissions summary

Name	Type	Used as
alpha-admin	Group	Permissions group
IAMUserChangePassword	AWS managed	Permissions policy

Tags - optional

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

Cancel Previous Create user

https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-1#/users/create

User created successfully

You can view and download the user's password and email instructions for signing in to the AWS Management Console.

IAM > Users > Create user

View user

Step 1 Specify user details

Step 2 Set permissions

Step 3 Review and create

Step 4 Retrieve password

Retrieve password

You can view and download the user's password below or email users instructions for signing in to the AWS Management Console. This is the only time you can view and download this password.

Console sign-in details

Console sign-in URL	Email sign-in instructions
https://223583608918.signin.aws.amazon.com/console	

User name

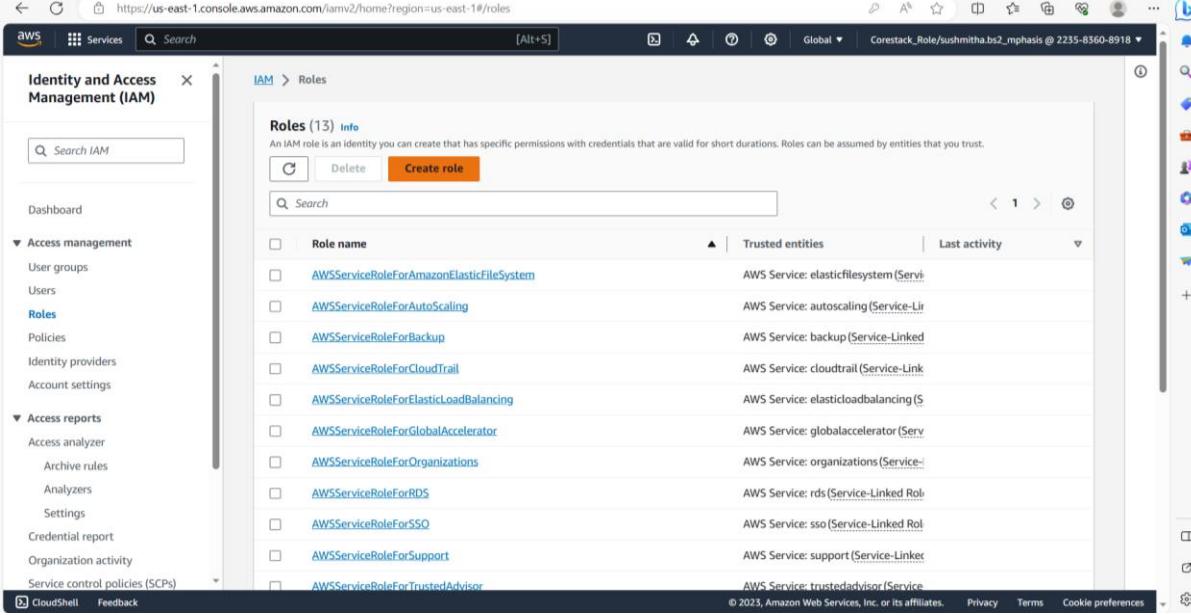
Sushmitha

Console password

***** Show

Cancel Download .csv file Return to users list

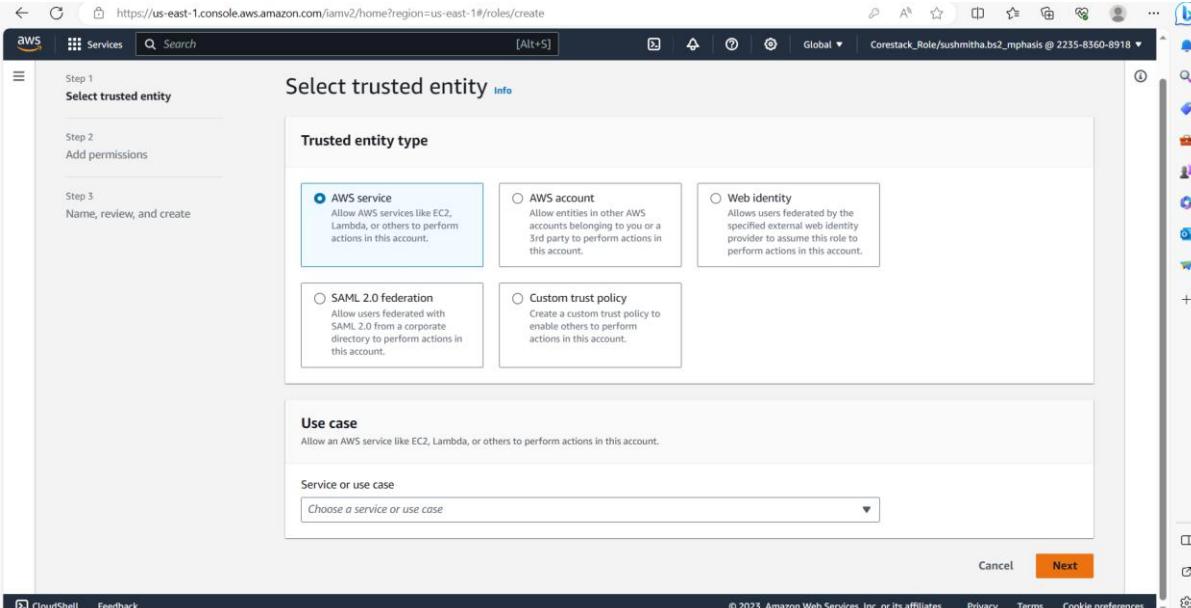
15. Create an IAM Role.



The screenshot shows the AWS IAM Roles page. On the left, a sidebar navigation includes 'Identity and Access Management (IAM)', 'Dashboard', 'Access management' (User groups, Users, Roles, Policies, Identity providers, Account settings), 'Access reports' (Access analyzer, Archive rules, Analyzers, Settings, Credential report, Organization activity, Service control policies (SCPs)), and 'CloudShell' and 'Feedback' buttons. The main content area is titled 'Roles (13) Info' and contains a table listing 13 pre-defined service roles:

Role name	Trusted entities	Last activity
AWSServiceRoleForAmazonElasticFileSystem	AWS Service: elasticfilesystem (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForAutoScaling	AWS Service: autoscaling (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForBackup	AWS Service: backup (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForCloudTrail	AWS Service: cloudtrail (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForElasticLoadBalancing	AWS Service: elasticloadbalancing (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForGlobalAccelerator	AWS Service: globalaccelerator (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForOrganizations	AWS Service: organizations (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForRDS	AWS Service: rds (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForSSO	AWS Service: sso (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForSupport	AWS Service: support (Service-Linked Role)	2023-07-10 10:30:00
AWSServiceRoleForTrustedAdvisor	AWS Service: trustedadvisor (Service-Linked Role)	2023-07-10 10:30:00

At the bottom right of the page are 'Privacy', 'Terms', and 'Cookie preferences' links.



The screenshot shows the 'Select trusted entity' step of the IAM Role creation wizard. The left sidebar shows 'Step 1 Select trusted entity' and 'Step 2 Add permissions'. The main content area has tabs for 'Trusted entity type' and 'Use case'. Under 'Trusted entity type', the 'AWS service' option is selected, with a description: 'Allow AWS services like EC2, Lambda, or others to perform actions in this account.' Other options include 'AWS account', 'Web identity', 'SAML 2.0 federation', and 'Custom trust policy'. Under 'Use case', there is a note: 'Allow an AWS service like EC2, Lambda, or others to perform actions in this account.' A dropdown menu for 'Service or use case' is shown. At the bottom right are 'Cancel' and 'Next' buttons.

https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-1#roles/create?selectedUseCase=EC2&trustedEntityType=AWS_SERVICE&sele...

Services Search [Alt+S]

Global Corestack_Role/sushmitha.bs2_mpasis @ 2235-8360-8918

Step 2: Add permissions

Permissions policy summary

Policy name	Type	Attached as
AdministratorAccess	AWS managed - job function	Permissions policy

Step 3: Add tags

Add tags - optional [Info](#)

Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.

No tags associated with the resource.

Add new tag

You can add up to 50 more tags.

Cancel Previous Create role

The screenshot shows the AWS IAM Role creation interface. In Step 2, a permissions policy named 'AdministratorAccess' is attached. In Step 3, there is a section for adding tags, which is currently empty. The 'Create role' button is highlighted in orange at the bottom right.

https://us-east-1.console.aws.amazon.com/iamv2/home?region=us-east-1#roles

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

- User groups
- Users
- Roles**
- Policies
- Identity providers
- Account settings

Access reports

- Access analyzer
- Archive rules
- Analyzers
- Settings
- Credential report
- Organization activity
- Service control policies (SCPs)

CloudShell Feedback

Role RoleEg created.

Roles (1/14) [Info](#)

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Role name	Trusted entities	Last activity
CS_Admin	Account: 905236315842	7 days ago
RoleEg	AWS Service: ec2	-

Roles Anywhere [Info](#)

Authenticate your non AWS workloads and securely provide access to AWS services.

Access AWS from your non AWS workloads

X.509 Standard

Temporary credentials

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The screenshot shows the AWS IAM Roles page. A success message 'Role RoleEg created.' is displayed. The 'Roles' table shows one role named 'RoleEg'. Below the table, there are three cards: 'Access AWS from your non AWS workloads' (using X.509 Standard), 'X.509 Standard' (using your own PKI infrastructure or AWS Certificate Manager Private Certificate Authority), and 'Temporary credentials' (using enhanced security). The bottom of the page includes standard AWS footer links.

16. Create an IAM Group

Create user group

Name the group

User group name
Enter a meaningful name to identify this group.
usergrp1
Maximum 128 characters. Use alphanumeric and *:=@_ characters.

Add users to the group - *Optional* (Selected 1/2) Info
An IAM user is an entity that you create in AWS to represent the person or application that uses it to interact with AWS. A user can belong to up to 10 groups.

User name	Groups	Last activity	Creation time
corestack-8797c	0	None	3 years ago
Sushmitha	1	None	6 minutes ago

Attach permissions policies - *Optional* (878) Info

usergrp1 user group created. [View group](#)

IAM > User groups

User groups (2) Info
A user group is a collection of IAM users. Use groups to specify permissions for a collection of users.

Group name	Users	Permissions	Creation time
alpha-admin	1	Defined	1 year ago
usergrp1	1	Defined	Now

17. Policies and Permissions

The screenshot shows the AWS S3 console with the URL <https://s3.console.aws.amazon.com/s3/buckets/mybucket852?region=us-east-1&tab=objects>. The left sidebar is titled "Amazon S3" and includes sections for Buckets, Storage Lens, and AWS Marketplace for S3. The main content area is titled "mybucket852" and shows the "Objects" tab selected. It displays one object named "Kubernetes.docx" with a size of 180.2 KB and a storage class of Standard. There are buttons for Upload, Copy S3 URI, Copy URL, Download, Open, Delete, Actions, and Create folder.

The screenshot shows the AWS S3 console with the URL <https://s3.console.aws.amazon.com/s3/bucket/mybucket852/property/policy/edit?region=us-east-1>. The left sidebar is identical to the previous screenshot. The main content area is titled "Edit bucket policy" and shows the "Bucket policy" section. It includes a "Bucket ARN" field with the value "arnaws:s3:::mybucket852". Below it is a "Policy" section with a text input field containing "1" and a "Select a statement" dropdown. A button labeled "+ Add new statement" is visible.

<https://awspolicygen.s3.amazonaws.com/policygen.html>

AWS Policy Generator
The AWS Policy Generator is a tool that enables you to create policies that control access to Amazon Web Services (AWS) products and resources. For more information about creating policies, see [key concepts in Using AWS Identity and Access Management](#). Here are [sample policies](#).

Step 1: Select Policy Type
A Policy is a container for permissions. The different types of policies you can create are an [IAM Policy](#), an [S3 Bucket Policy](#), an [SNS Topic Policy](#), a [VPC Endpoint Policy](#), and an [SQS Queue Policy](#).

Select Type of Policy: [S3 Bucket Policy](#)

Step 2: Add Statement(s)
A statement is the formal description of a single permission. See [a description of elements](#) that you can use in statements.

Effect: Allow Deny

Principal: [Allow Creation](#)
Use a comma to separate multiple values.

AWS Service: [Amazon S3](#) All Services (*)

Actions: [1 Action\(s\) Selected](#) All Actions (*)

Amazon Resource Name (ARN): [\[Empty\]](#)
ARN should follow the following format: arn:aws:s3:::\${BucketName}/\${KeyName}.
Use a comma to separate multiple values.

Add Conditions (Optional)

[Add Statement](#) Resource field is not valid. You must enter a valid ARN.

[https://awspolicygen.s3.amazonaws.com/policygen.html](#)

You added the following statements. Click the button below to Generate a policy.

Principal(s)	Effect	Action	Resource	Conditions
• Allow Creation	Allow	• s3:CreateBucket	arn:aws:s3:::mybucket852	None

Step 3: Generate Policy
A **policy** is a document (written in the [Access Policy Language](#)) that acts as a container for one or more statements.

[Generate Policy](#) [Start Over](#)

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https://awspolicygen.s3.amazonaws.com/policygen.html

Use a comma to separate multiple values.

AWS Service: Amazon S3 All Services ('*)

Actions: Select Actions ... All Actions ('*)

Amazon S3 Policy JSON Document

Click below to edit. To save the policy, copy the text below to a text editor.
Changes made below will not be reflected in the policy generator tool.

```
{ "Id": "Policy1694799749016", "Version": "2012-10-17", "Statement": [ { "Sid": "Stmt1694799736339", "Action": [ "s3:createBucket" ], "Effect": "Allow", "Resource": "arn:aws:s3:::mybucket852", "Principal": { "AWS": [ "Allow Creation" ] } } ] }
```

Principal: • Allow

Step 3:
A policy is a set of rules that define what actions are allowed or denied for specific users or groups.

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18. Empty an S3 Bucket

The screenshot shows the AWS S3 console interface. On the left, the navigation pane is open with the 'Buckets' section selected. The main area displays an 'Account snapshot' summary with metrics like Total storage (16.9 MB), Object count (1), and Average object size (16.9 MB). Below this is a table of buckets, showing one bucket named 'mybucket852' located in 'US East (N. Virginia) us-east-1' with access set to 'Objects can be public'. A 'Create bucket' button is visible at the top right of the bucket list.

The screenshot shows the 'Empty bucket' confirmation dialog for the bucket 'mybucket852'. It includes a warning message about the不可逆性 of the action, a note about lifecycle rules, and a text input field where the user has typed 'permanently delete'. At the bottom, there are 'Cancel' and 'Empty' buttons.

← ⌂ https://s3.console.aws.amazon.com/s3/bucket/mybucket852/empty?region=us-east-1

AWS Services Search [Alt+S] Global Corestack_Role@sushmitha.bs2_mpahsis @ 2235-8360-8918 ▾

Successfully emptied bucket "mybucket852"
View details below. If you want to delete this bucket, use the delete bucket configuration.

Empty bucket: status

The details below are no longer available after you navigate away from this page.

Summary

Source	Successfully deleted	Failed to delete
s3://mybucket852	1 object, 180.2 KB	0 objects

Failed to delete (0)

Name	Prefix	Version ID	Type	Last modified	Size	Error
No failed object deletions						

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