

Create and Instance

Step 1: Select “Region” as shown in below figure

Step 2: Create “Instance” as shown in below figure

Assignment 1 - EBS, AMI and Volume

Step 3: Select SSH, HTTP AND HTTPS

The screenshot shows the 'Launch an instance' wizard in the AWS EC2 console. In the 'Network settings' section, a new security group named 'launch-wizard-3' is being created with rules for SSH, HTTPS, and HTTP traffic from anywhere. The 'Configure storage' section shows a 1x 8 GiB gp3 root volume. The 'Summary' section indicates 1 instance will be launched using the Amazon Linux 2023.9.2 AMI.

Step 4: Instance is created as shown in below figure

The screenshot shows the EC2 Instances page with a single instance named 'i-0d315a26a3b6221cf'. The instance is running, with a Public IPv4 address of 54.227.90.216 and a Private IP address of 172.31.29.215. It is associated with a t3.micro instance type and is part of a subnet ID subnet-09bf0c6b118b906. The instance ARN is arn:aws:ec2:us-east-1:256716302785:instance/i-0d315a26a3b6221cf.

Create AMI

Step 1: Go to AMI as shown in below figure

The screenshot shows the EC2 Instances page with the 'AMIs' tab selected. It displays a table of instances, with one row for 'Instance-for-EBS' (i-0d315a26a3b6221cf) highlighted. The instance is running and has a Public IPv4 DNS of ec2-54-227-90-216.compute-1.amazonaws.com.

Assignment 1 - EBS, AMI and Volume

Step 2: You will be redirect to below section

The screenshot shows the AWS EC2 console with the 'AMIs' section selected. On the left, there's a navigation sidebar with options like 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, Network & Security, Security Groups, Elastic IPs, Placement Groups, Key Pairs, and Network Interfaces. The main area is titled 'Amazon Machine Images (AMIs) Info' and has a search bar for 'Find AMI by attribute or tag'. It includes filters for 'Name', 'AMI name', 'AMI ID', 'Source', 'Owner', 'Visibility', 'Status', and 'Creation date'. A message at the top right says 'No AMIs in this Region for: Owned by me.' Below this is a section titled 'Select an AMI'.

Step 3: Go to Instance, and select the Instance → Click on “Actions” → “Image and Templates” → “Create Image” as shown in below figure

The screenshot shows the AWS EC2 Instances page. On the left, the navigation sidebar includes 'Instances' under the 'Instances' category. In the main area, a table lists an instance named 'Instance-for-EBS' with the ID 'i-0d315a26a3b6221cf'. The instance is running, t3.micro, with 3/3 checks passed, in us-east-1d, and has a public IPv4 DNS of 'ec2-54-227-90-216.compute-1.amazonaws.com'. To the right of the instance table is an 'Actions' dropdown menu with several options: 'Connect', 'Instance state', 'Actions' (which is expanded), 'Launch instances', 'Instance diagnostics', 'Instance settings', 'Networking', 'Security', 'Image and templates' (which is also expanded), and 'Monitor and troubleshooting'. The 'Create image' option under 'Image and templates' is highlighted with a red box.

Step 4: Give Instance name and click on “Create image” as shown in below figure

The screenshot shows the 'Create image' wizard. The first step, 'Image details', is displayed. It shows the instance ID 'i-0d315a26a3b6221cf (instance-for-EBS)' and the 'Image name' field, which contains 'EBS-instance-copy-US-West-2'. Below this is an 'Image description' field with the placeholder 'Image description - optional'. There's a checkbox for 'Reboot instance' with the note 'When selected, Amazon EC2 reboots the instance so that data is at rest when snapshots of the attached volumes are taken. This ensures data consistency.' Under 'Instance volumes', it shows an EBS volume with a size of 8 GiB, a snapshot of 'Create new snapshot from s...', a volume type of 'EBS General Purpose SSD', an IOPS of 1000, throughput of 1000 MiB/s, 'Delete on termination' checked, and 'Encrypted' unchecked. A note states 'During the image creation process, Amazon EC2 creates a snapshot of each of the above volumes.' At the bottom, there are sections for 'Tags - optional' (with a note about tags being a key-value pair) and 'Tag image and snapshots together' (with a note about tagging both the image and snapshots with the same tag). A note at the bottom left says 'No tags associated with the resource.' and a note at the bottom right says 'You can add up to 50 more tags.' A large orange 'Create Image' button is at the bottom right of the form.

Assignment 1 - EBS, AMI and Volume

Step 5: Go to **AMI**, you can see the **AMI** is created

The screenshot shows the AWS EC2 console with the 'AMIs' section selected. A single AMI entry is displayed in the table:

Name	AMI ID	Source	Owner	Visibility	Status	Creation date	Platform	Root device type
EBS-instance-copy-US-West-2	ami-01e985a3aba9d42b3	256716302785/EBS-instance-copy-US...	256716302785	Private	Pending	2025/10/08 23:46 GMT+5:30	Linux/UNIX	ebs

Copy AMI TO US-WEST-2 Region

Step 1: Select “**AMI**”, go to “**Action**” -> then click on “**Copy AMI**”

The screenshot shows the AWS EC2 console with the 'AMIs' section selected. The 'Actions' dropdown menu is open over the selected AMI, with the 'Copy AMI' option highlighted.

Step 2: You will get below section, select “**Region**” as shown in below picture

The screenshot shows the 'Copy AMI' configuration dialog. The 'Destination Region' dropdown is set to 'United States (Oregon)' and is highlighted with a red box.

Assignment 1 - EBS, AMI and Volume

Step 3: You will see the below page, once it is initiated

The screenshot shows the AWS EC2 console under the 'AMIs' section. A blue banner at the top indicates an 'AMI copy operation for ami-01e985a3aba9d42b3 initiated'. Below this, a table lists the copied AMI: 'EBS-instance-copy-US-West-2' with AMI ID 'ami-01e985a3aba9d42b3', Source '256716302785/EBS-instance-copy-US...', Owner '256716302785', Visibility 'Private', Status 'Available', Creation date '2025/10/08 23:46 GMT+5:30', Platform 'Linux/UNIX', and Root device type 'ebs'. The table has columns for Name, AMI name, AMI ID, Source, Owner, Visibility, Status, Creation date, Platform, and Root device type.

Step 4: Go to **US-WEST-2** region to check

This screenshot shows the same EC2 AMIs page, but the sidebar on the right displays the 'Region' dropdown set to 'United States (N. Virginia)'. The 'Region' dropdown is expanded to show the 'us-west-2' region highlighted. Other regions listed include us-east-1, us-east-2, us-west-1, us-west-2, ap-south-1, ap-northeast-3, ap-southeast-2, ap-southeast-1, ap-southeast-3, ap-northeast-1, ca-central-1, eu-central-1, and eu-west-1.

Create Volume

Step 1: Go to “**Elastic Block Store**”, and click on “**Volumes**” and then click on “**Create Volume**”

The screenshot shows the AWS EC2 console under the 'Elastic Block Store' section, specifically the 'Volumes' tab. A red box highlights the 'Elastic Block Store' link in the sidebar. The main table shows one volume: 'vol-0f662b7b2dc59cbf0' with Type 'gp3', Size '8 GiB', IOPS '3000', Throughput '125', Snapshot ID 'snap-070462...', Created '2025/10/08 23:38 GMT+5:30', Availability Zone 'us-east-1d', Volume state 'In-use', and Attached resource 'i-0d515a27ea3b62'. The table has columns for Name, Volume ID, Type, Size, IOPS, Throughput, Snapshot ID, Created, Availability Zone, Volume state, Alarm status, and Attached resource. At the bottom left, a summary states 'Fault tolerance for all volumes in this Region' and 'Snapshot summary' with '1 / 1' snapshots backed up. A note says 'Data Lifecycle Manager default policy for EBS Snapshots status'.

Assignment 1 - EBS, AMI and Volume

Step 2: Select Size like **5, 10, 15** etc according to requirement and click on “**Create Volume**”

The screenshot shows the 'Create volume' wizard in the AWS EBS console. The 'Volume settings' section is open, displaying the following configuration:

- Volume type:** General Purpose SSD (gp3)
- Size (GB):** 5
- IOPS:** 3000
- Throughput (Mbps):** 125
- Availability Zone:** us-east-1a
- Snapshot ID - optional:** Don't create volume from a snapshot
- Encryption:** Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.
- Tags - optional:** Add tag (You can add 50 more tags.)
- Snapshot summary:** Click refresh to view backup information.

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

Step 3: Select “**Availability zone**” as shown in below figure

The screenshot shows the 'Create volume' wizard in the AWS EBS console. The 'Volume settings' section is open, and the 'Availability Zone' dropdown is expanded, listing several zones:

- us-east-01d
- us-east-1a
- us-east-1b
- us-east-1c** (highlighted with a red box)
- us-east-1d
- us-east-1e
- us-east-1f

Below the dropdown, there is a note about tags and a 'Tags - optional' section.

Step 3: Give a name to Volumes Created

The screenshot shows the 'Volumes' list in the AWS EBS console. The table displays the following information for two volumes:

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state	Alarm status	Attached resources	Status check	Init
vol-0f562b7026d9bf0	gp3	8 GiB	3000	125	snap-0704622...	2025/10/08 23:38 GMT+5...	us-east-1d	In-use	No alarms	+ 1-0e315a2643b6221cf (Inst...)	OKay	-	
ebs-01	vol-037f0b2a48e053d0	gp3	5 GiB	3000	125	-	2025/10/09 00:07 GMT+5...	us-east-1d	Available	No alarms	+ -	OKay	

Assignment 1 - EBS, AMI and Volume

Step 4: Select **Volume** -> go to “Actions” click on “Attach Volume”

The screenshot shows the AWS EC2 Volumes page. A specific volume, 'ebs-01', is selected in the list. The 'Actions' menu is open, and the 'Attach volume' option is highlighted with a red box.

Step 5: Select “**Instance**” as shown in below figure

The screenshot shows the 'Attach volume' dialog box. In the 'Basic details' section, the 'Instance' dropdown is expanded, showing an instance named 'i-0d315a26a3b6221cf (instance-for-EBS) (running)'. This dropdown is highlighted with a red box.

Step 6: Select “**Device name**” and click on “**Attach Volume**”

The screenshot shows the 'Attach volume' dialog box. In the 'Basic details' section, the 'Device name' dropdown is selected, showing '/dev/sdb'. This dropdown is highlighted with a red box. At the bottom right of the dialog box, the 'Attach volume' button is highlighted with a red box.

Step 7: You can see the **Attached Volume** as shown in below picture

The screenshot shows the AWS EC2 Volumes page. It lists three volumes: 'vol-0f65cb75c1e939ef0' (attached to 'i-0d315a26a3b6221cf'), 'ebs-01' (attached to 'i-0d315a26a3b6221cf'), and 'ebs-02' (attached to 'i-0d315a26a3b6221cf'). The 'Attached resources' section on the right shows the three instances with their respective device names ('/dev/xvda' and '/dev/sdb') highlighted with a red box.

Step 8: Delete one volume after detaching it and extend the size of the other volume.

Assignment 1 - EBS, AMI and Volume

Select “Volume” -> click on “Action” -> and then click on “Detach Volume”

The screenshot shows the AWS EC2 Volumes page. There are two volumes listed: ebs-01 and ebs-02. The Actions menu for ebs-01 is open, and the 'Detach volume' option is highlighted with a red box.

Step 9: Click on “Detach” as shown in below figure

The screenshot shows a confirmation dialog titled 'Detach vol-027bf0b2a48ed3de0 (ebs-01)'. It asks if you want to detach the volume. The 'Detach' button is highlighted with a red box.

Step 10: Select the Volume and click “Attach” click “Delete Volume”

The screenshot shows the AWS EC2 Volumes page. The volume ebs-01 is now listed with a crossed-out icon. The Actions menu for ebs-01 is open, and the 'Delete volume' option is highlighted with a red box.

Step 11: You can see the volume deleted as shown in below picture

The screenshot shows the AWS EC2 Volumes page. The volume ebs-01 is no longer listed. A green message at the top says 'Successfully deleted volume vol-027bf0b2a48ed3de0.' The Actions menu for ebs-01 is open, and the 'Delete volume' option is highlighted with a red box.

Extend The Size of Another Volume

Step 1: Select the “Volume” -> Click on “Action” -> Click on “Modify Volume”

The screenshot shows the AWS EC2 Volumes page. A volume named 'ebs-02' is selected. An 'Actions' dropdown menu is open, with the 'Modify volume' option highlighted. Other options in the menu include 'Create snapshot', 'Create snapshot lifecycle policy', 'Delete volume', 'Attach volume', 'Detach volume', 'Force detach volume', 'Manage auto-enabled I/O', 'Manage tags', and 'Resilience testing'.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created
ebs-02	vol-0da8d5266185d4245	gp3	10 GiB	3000	125	snap-0704622...	2025/10/08 23:38 GMT+5...

Step 2: Add the size and click on “Modify”

The screenshot shows the 'Modify volume' dialog box. The 'Volume details' section is displayed. The 'Size (GiB)' field is set to '20'. The 'Modify' button is highlighted with a red box.

Step 3: You can see the Size is Extended

The screenshot shows the AWS EC2 Volumes page again. The volume 'ebs-02' is now listed with a size of '20 GiB'. The 'Actions' column for this volume shows 'In-use' and 'No alarms'.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state	Alarm status
ebs-02	vol-0da8d5266185d4245	gp3	20 GiB	3000	125	-	2025/10/09 00:08 GMT+5...	us-east-1d	In-use	No alarms

Take Backup of Volume

Step 1: Select Volume, click on “Action” -> “Create Snapshot”

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created
vol-0f662b7b2dc59cbf0	gp3	8 GiB	3000	125	snap-0704622...	2025/10/08 23:38 GMT+5...	
ebs-02	vol-0da8d5266185d4245	gp3	20 GiB	3000	125	-	2025/10/09 00:08 GMT+5...

Step 2: Click on “Create Snapshot”

Create snapshot Info

Create a point-in-time snapshot to back up the data on an Amazon EBS volume to Amazon S3.

Source volume

Volume ID: vol-0da8d5266185d4245 (ebs-02)

Availability Zone
us-east-1d

Snapshot details

Description
Add a description for your snapshot.
snapshot for volume
255 characters maximum.

Encryption Info
Not encrypted

Tags 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.

Create snapshot

Step 3: You can see the successfully created as shown in below figure

Successfully created snapshot snap-0c39200a791debdb4 from volume vol-0da8d5266185d4245.
If you need your snapshot to be immediately available consider using Fast Snapshot Restore.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volum
vol-0f662b7b2dc59cbf0	gp3	8 GiB	3000	125	snap-0704622...	2025/10/08 23:38 GMT+5...	us-east-1d	In-l	
ebs-02	vol-0da8d5266185d4245	gp3	20 GiB	3000	125	-	2025/10/09 00:08 GMT+5...	us-east-1d	In-l

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Step 4: You can see the Snapshot created as shown in below Figure

The screenshot shows the AWS EC2 Snapshots page. On the left, there's a navigation sidebar with sections like Dashboard, EC2 Global View, Instances, Images, Elastic Block Store, Network & Security, and more. The main area displays a single snapshot named "snap-0c39200a791debbb4". The "Details" section shows the Snapshot ID, Owner (Account ID 256716302785), Description ("snapshot for volume"), Source volume (Volume ID vol-0da8bd5266185d4245, Volume size 20 GiB), and Encryption (Not encrypted). The "Progress" bar indicates 99% completion. The "Snapshot status" is Pending. Below the details, there are tabs for "Snapshot settings" (selected), "Storage tier", and "Tags". Under "Snapshot settings", there's a "Lock mode" dropdown set to "Not locked" and a "Share permissions" section with a "Modify permissions" button. The top right of the page shows account information (Account ID: 256716302785, Region: United States (N. Virginia)), a user name (Medhini), and standard AWS navigation icons.