

EBS storage of ec2 machine

We have a elastic block storage for the ec2 machine which is of three types :

- 1) SSD – solid state drive ...fastest but costly
- 2) HDD – hard disk drive Is slowed and comparatively cheaper
- 3) Magnetic storage – Slowest storage

SSD:



HDD:



Magnetic :



Now in our machine we have attach any kind of storage as per the need and requirement

Now if we shut down the machine by default the storage is intact and the machine is deleted . and we restart the machine the new machine is now attached and same storage is used so that your data is not deleted. Whereas terminating the machine deletes the data .

For this reason , the public ip of the machine changes when we restart the machine because the ip address is associated with the machine

So ,
lets see if we attach a new volume to existing machine :

I already have a machine running

Successfully terminated i-0c20e33402e983720

Instances (1/2) Info Refresh Connect Instance state Actions Launch inst

Find instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

	Name	Instance ID	Instance state	Instance type
<input type="checkbox"/>	replica of linux machine	i-0c20e33402e983720	Terminated	t2.micro
<input checked="" type="checkbox"/>	linux-machine	i-07ea0177aa3a3eab7	Running	t2.micro

Instance: i-07ea0177aa3a3eab7 (linux-machine)

Details Security Networking Storage Status checks Monitoring Tags

▼ Instance summary Info

Instance ID	Public IPv4 address	Private IPv4 addresses
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Create volume

Volume type [Info](#)

General Purpose SSD (gp2) ▼

Size (GiB) [Info](#)

1

Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

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

Create volume

Q Search

< 1 > ⚙

<input type="checkbox"/>	Name ▼	Volume ID ▼	Type ▼	Size ▼	IOPS ▼	Throughput ▼	Snapshot
<input type="checkbox"/>	-	vol-03344254396a1fbd7	gp3	8 GiB	3000	125	snap-02cac53...
<input type="checkbox"/>	-	vol-08a4196a7da2ae89b	gp2	1 GiB	100	-	-

Now you will see two volume ...one volume is the volume which is associated with the existing machine

Where is the volume which is 1 GiB is not associated with any machine as of now

New EC2 Experience
Tell us what you think

EC2 Dashboard
EC2 Global View
Events
Limits

▼ Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances

Successfully created volume vol-08a4196a7da2ae89b.

Volumes (2) [Info](#)

Q Search

⌂ Actions ▼ Create volume

< 1 > ⚙

Throughput ▼	Snapshot ▼	Created	Availability Zone ▼	Volume state ▼	Alarm status
125	snap-02cac53...	2023/06/05 17:05 GMT+5:...	us-east-1b	In-use	No alarms
-	-	2023/06/06 13:38 GMT+5:...	us-east-1a	Available	No alarms

Select a volume above

Services Search [Alt+S] N. Virginia

2 Experience at you think

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Instances

Successfully created volume [vol-08a4196a7da2ae89b](#).

Volumes (1/2) Info

Search

	Name	Volume ID	Type	Size	IOPS
<input type="checkbox"/>	-	vol-03344254396a1fbd7	gp3	8 GiB	3000
<input checked="" type="checkbox"/>	-	vol-08a4196a7da2ae89b	gp2	1 GiB	100

Volume ID: vol-08a4196a7da2ae89b

Details Status checks Monitoring Tags

Actions

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

aws Services Search [Alt+S] N. Virginia SamjayGarer

EC2 > Volumes > vol-08a4196a7da2ae89b > Attach volume

Attach volume

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID

[vol-08a4196a7da2ae89b](#)

Availability Zone

Search

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

Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

You will not see any instance because first you need to stop the machine then only you can attach the volume with your machine

Lets do it ...

Go back to ec2 -> instances

LIMITS

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Basic details

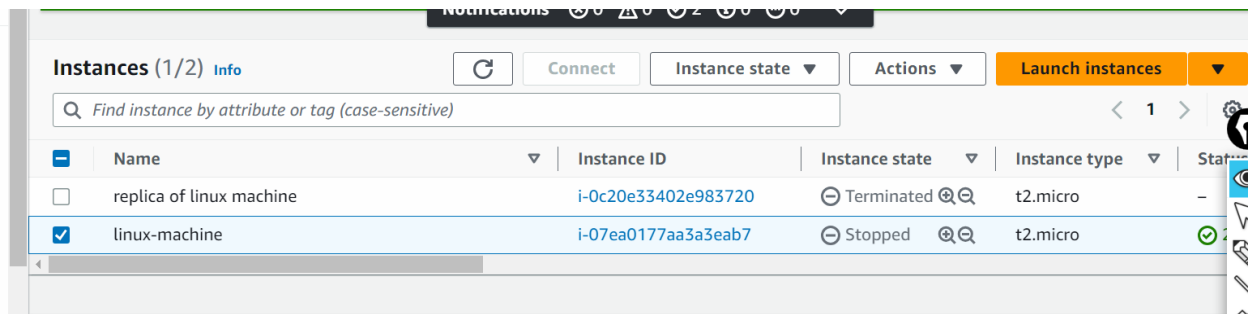
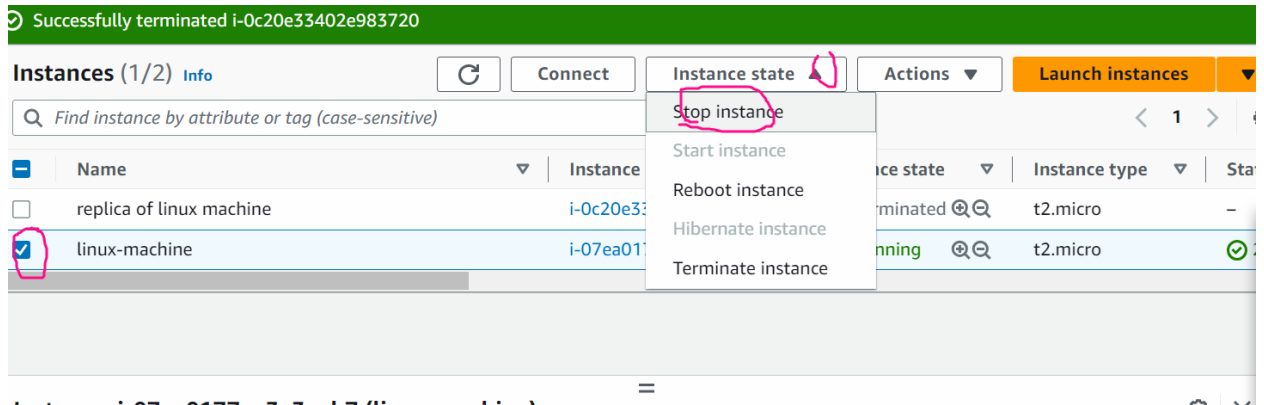
Volume ID

[vol-08a4196a7da2ae89b](#)

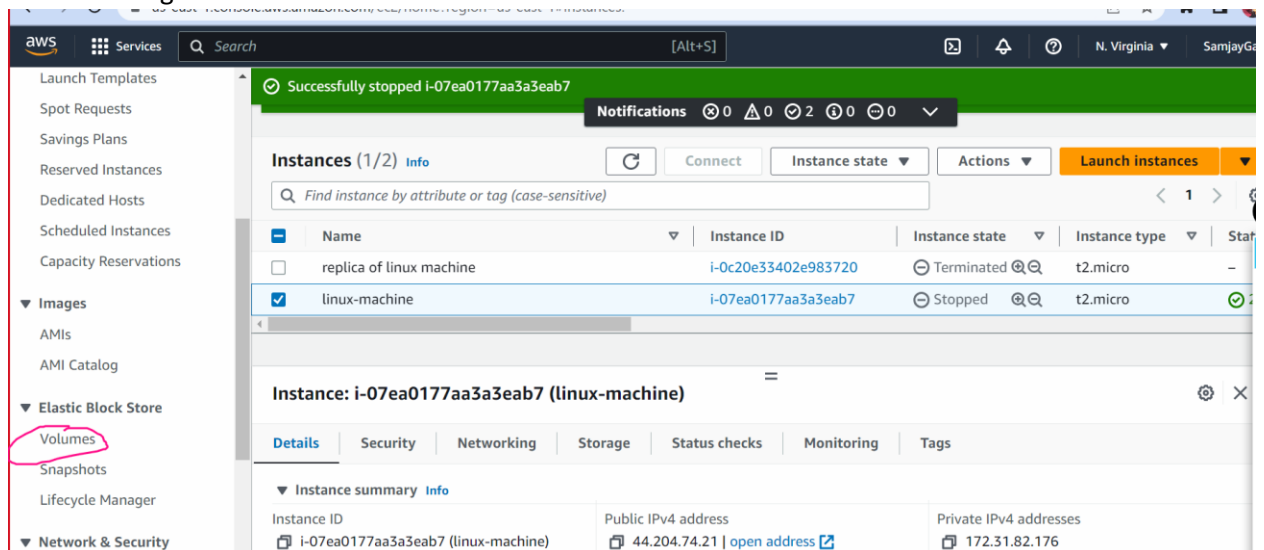
Availability Zone

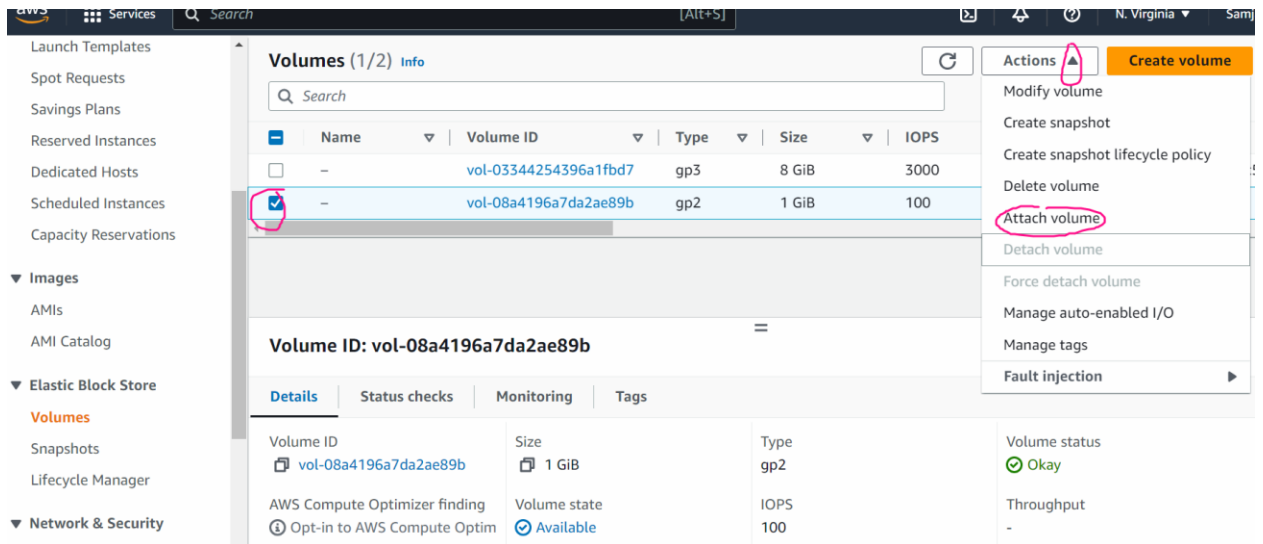
us-east-1a

Instance [Info](#)

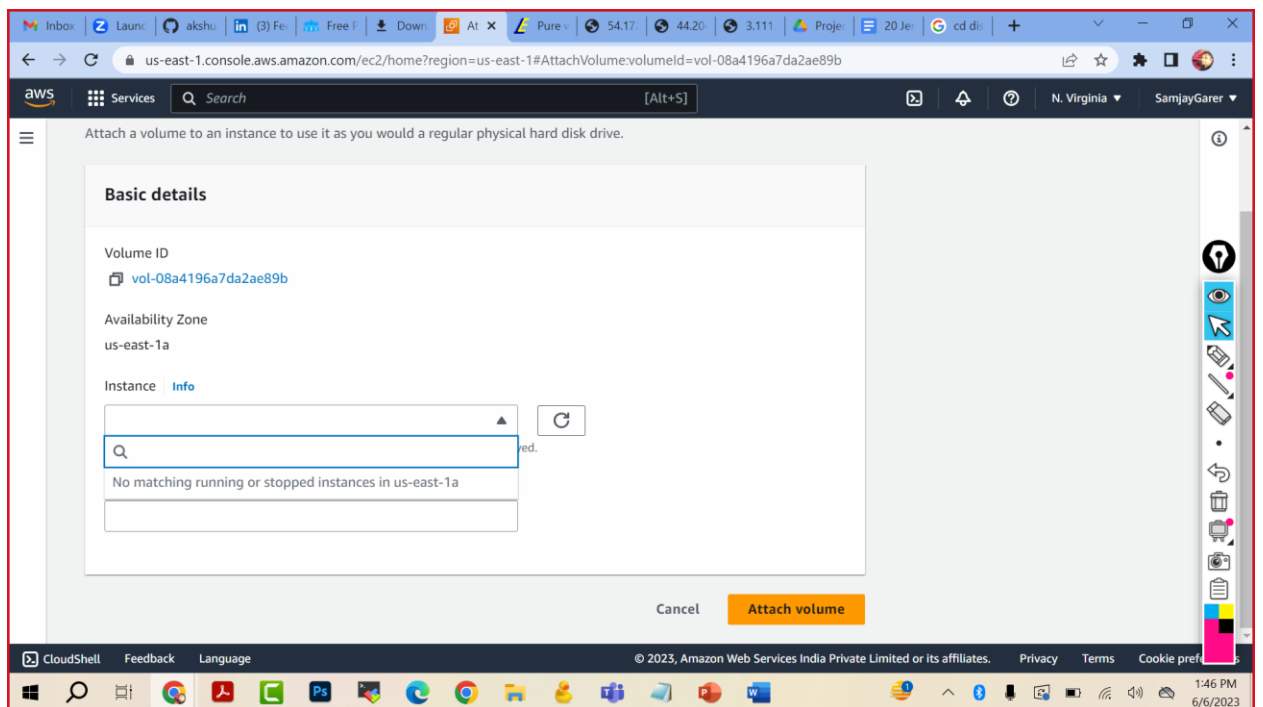


Now we can go back to ebs



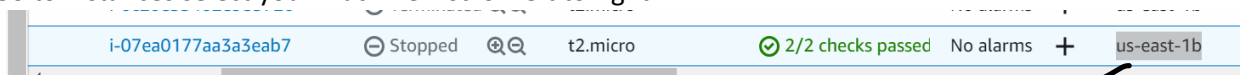


If your instance is in a different AZ then also you will not be able to find the instance. Still we will not be able to find the instance.



We have again recreated the volume but in the same availability zone as your machine

Go to instances select your machine ...scroll left to right



Go back to volumes again and create a new volume us-east-1b

Volume type [Info](#)

General Purpose SSD (gp2) ▼

Size (GiB) [Info](#)

2

Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

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](#)


Create volume

EC2 Experience 
 s what you think

Dashboard
 Global View

Resources
 Instances
 Types
 Templates
 Requests
 Plans
 Attached Instances
 Detached Hosts
 Attached Instances





Successfully created volume **vol-0a8a18e09d6a70b4e**.


Volumes (1/3) [Info](#) 


	Name	Volume ID	Type	Size	IOPS
<input type="checkbox"/>	-	vol-03344254396a1fbd7	gp3	8 GiB	3000
<input checked="" type="checkbox"/>	-	vol-0a8a18e09d6a70b4e	gp2	2 GiB	100
<input type="checkbox"/>	-	vol-08a4196a7da2ae89b	gp2	1 GiB	100


Volume ID: vol-0a8a18e09d6a70b4e

[Details](#) [Status checks](#) [Monitoring](#) [Tags](#)

Volume ID	Size	Type
 vol-0a8a18e09d6a70b4e	 2 GiB	gp2
AWS Compute Optimizer finding	Volume state	IOPS
 Opt-in to AWS Compute Optim	 Available	100


Actions  [Create volume](#)

- Modify volume
- Create snapshot
- Create snapshot lifecycle policy
- Delete volume
- Attach volume**
- Detach volume
- Force detach volume
- Manage auto-enabled I/O
- Manage tags
- Fault injection**
- Volume status
-  Okay
- Throughput
-

Volume ID
 [vol-0a8a18e09d6a70b4e](#)

Availability Zone
us-east-1b


Instance [Info](#)



Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)


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

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

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


Click on attach volumes

Successfully attached volume [vol-0a8a18e09d6a70b4e](#) to instance [i-07ea0177aa3a3eab7](#).

Volumes (3) [Info](#)  [Actions](#) [Create volume](#)

Lets start the machine

Now lets connect to the machine

Instances (1/2) [Info](#)  [Connect](#) [Instance state](#) [Actions](#) [Launch instance](#)




Find instance by attribute or tag (case-sensitive)

	Name	Instance ID	Instance state	Instance type
<input type="checkbox"/>	replica of linux machine	i-0c20e33402e983720	Terminated	t2.micro
<input checked="" type="checkbox"/>	linux-machine	i-07ea0177aa3a3eab7	Running	t2.micro

Instance: i-07ea0177aa3a3eab7 (linux-machine)

[Details](#) [Security](#) [Networking](#) [Storage](#) [Status checks](#) [Monitoring](#) [Tags](#)

▼ Instance summary [Info](#)

Instance ID  i-07ea0177aa3a3eab7 (linux-machine)	Public IPv4 address  3.84.23.24 open address	Private IPv4 addresses  172.31.82.176
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