

1. If we need to increase the size of root ebs volume snapshot is required. (Snapshot is chargeable. Size of snapshot = size of volume)

Create snapshot of root ebs volume

Resource type: **Volume**
Create a snapshot from a specific volume.

Volume ID: **vol-0c5e020c3f0c44f6c**
The volume from which to create the snapshot.

Snapshot details

Description: **snapshotofrootvolume**
Add a description for your snapshot.
255 characters maximum

Encryption: **Not encrypted**

Tags

No tags associated with the resource.

Add tag
You can add 50 more tags.

Create snapshot

Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started	Progress	Encryption	KMS key ID
	snap-0924f9793d6b952a0	8 GiB	snapshotofrootvolume	Standard	Completed	2024/09/16 20:47 GMT+5:...	Available (100%)	Not encrypted	-

2. Create volume using snapshot make Availability of zone and instance is same.

Volume settings

Snapshot ID: **snap-0924f9793d6b952a0**

Volume type: **General Purpose SSD (gp3)**

Size (GiB): **15**
Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

IOPS: **3000**
Min: 3000 IOPS, Max: 16000 IOPS. The value must be an integer.

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

Availability Zone: **ap-south-1b**

Fast snapshot restore: **Not enabled for selected snapshot**

Encryption: **Not encrypted this volume**

3. Stop instance

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP	IPv6 IPs
Newoneforca...	i-0a02764a2c49f9f	Terminated	t3a.small	-	View alarms +	ap-south-1b	-	-	-	-
oneinstance01...	i-0417782a8e1d8374b	Stopped	t2.micro	-	View alarms +	ap-south-1b	-	-	-	-

4. Detaching root ebs volume

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state	Alarm status	Attac
	vol-0a9238c4a4528f1b5	gp3	10 GiB	3000	125	-	2024/09/16 20:23 GMT+5:...	ap-south-1b	In-use	No alarms	+ i-041
	vol-065ae20c3f0c44f6c	gp2	8 GiB	100	-	snap-0841f6a2...	2024/09/16 20:23 GMT+5:...	ap-south-1b	Available	No alarms	+ -
	vol-0256477fcc0b07f6a	gp3	15 GiB	3000	125	snap-0924f97...	2024/09/16 21:10 GMT+5:...	ap-south-1b	Available	No alarms	+ -

5. Attaching root ebs volume from Snapshot to the instance

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-025d477fcc9ef76a

Availability Zone
ap-south-1b

Instance [Info](#)
i-0417782a8e1d8374b

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

Device name [Info](#)
/dev/xvda

Recommended device names for Linux: /dev/xvda for root volume, /dev/sd[t-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**

Volumes (3) [Info](#)

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created	Availability Zone	Volume state	Alarm status	Actions
-	vol-0a9238c4a4528f1b5	gp3	10 GiB	3000	125	-	2024/09/16 20:23 GMT+5:30	ap-south-1b	In-use	No alarms	+ i-041
-	vol-025d477fcc9ef76a	gp3	15 GiB	3000	125	snap-0924f97...	2024/09/16 21:10 GMT+5:30	ap-south-1b	In-use	No alarms	+ i-041
-	vol-065ae20e3f6d44f6	gp2	8 GiB	100	-	snap-0841fa2...	2024/09/16 20:23 GMT+5:30	ap-south-1b	Available	No alarms	+ -

6. Start the instance we see the volume is extended

Instances (1/2) [Info](#)

Find Instance by attribute or tag (case-sensitive)

Instance state: **Running** | Instance type: **t2.micro** | Status check: **Initializing** | Alarm status: **View alarms +** | Availability Zone: **ap-south-1b** | Public IPv4 DNS: **ec2-45-1-108-86.ap-sou...** | Public IPv4 ...: **65.1.108.86** | Elastic IP: **-** | IPv6 IP: **-**

i-0417782a8e1d8374b (oneinstance0102)

Root device details

Root device name: **/dev/xvda** | 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-025d477fcc9ef76a	/dev/xvda	15	Attached	2024/09/16 21:12 GMT+5:30	No	-	No
vol-0a9238c4a4528f1b5	/dev/sdb	10	Attached	2024/09/16 20:23 GMT+5:30	No	-	No

Successfully extended root ebs volume to 15 gb

```
[root@ip-172-31-10-32:~]# login as: ec2-user
Authenticating with public key "soheldemo-001"
Last login: Mon Sep 16 14:57:12 2024 from 152.57.2.140

      ##
     ###\
    ~~~\####\
        \###|
         \#/
          V~' ->
             /
            /
           /m/'

Amazon Linux 2

AL2 End of Life is 2025-06-30.

A newer version of Amazon Linux is available!

Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-10-32 ~]$ sudo su -
Last login: Mon Sep 16 14:57:21 UTC 2024 on pts/0
[root@ip-172-31-10-32 ~]# lsblk
NAME        MAJ:MIN RM   SIZE RO TYPE MOUNTPOINT
xvda       202:0    0   15G  0 disk 
└─xvda1    202:1    0   15G  0 part /
xvdb       202:16   0   10G  0 disk 

[root@ip-172-31-10-32 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        467M   0   467M   0% /dev
tmpfs           477M   0   477M   0% /dev/shm
tmpfs           477M 408K  476M   1% /run
tmpfs           477M   0   477M   0% /sys/fs/cgroup
/dev/xvda1      15G  1.8G   14G  12% /
tmpfs          96M   0   96M   0% /run/user/1000
```

3. Increase the size of EBS Volume

Create one instance having Root EBS volume and EBS volume of 8gb & 5 gbeach

AWS **Servers**
Search [Alt+S]
Mumbai | sheli001 | 7158-8185-1281

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EC2 Dashboard
EC2 Global View

Events

Instances

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Instances (1/2) info
Last updated 1 minute ago
Connect
Instance state ▾
Actions ▾
Launch instances ▾

All states ▾

<input type="checkbox"/>	Name ↵	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Elastic IP
<input type="checkbox"/>	ebsextendvolumesha0101	i-0d6701ed865081da7	Terminated 🔍	t2.micro	-	View alarms +	ap-south-1b	-	-	-
<input checked="" type="checkbox"/>	extendebsvolume2020	i-05eb561cfa4b2391d	Running 🔍	t2.micro	Initializing ⌚	View alarms +	ap-south-1b	ec2-15-207-111-53.ap...	15.207-111.53	-

i-05eb561cfa4b2391d (extendebsvolume2020)

Details
Status and alarms
Monitoring
Security
Networking
Storage
Tags

▼ Root device details

Root device name /dev/xvda	Root device type EBS	EBS optimization disabled
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▼ Block devices

<input type="checkbox"/>	Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Delete on termination
<input checked="" type="checkbox"/>	vol-08616b098813c2dc6	/dev/sda	8	Attached 🔍	2024/09/16 23:03 GMT+5:30	No	-	Yes
<input type="checkbox"/>	vol-07ab092863a2c2863	/dev/sdb	5	Attached 🔍	2024/09/16 23:03 GMT+5:30	No	-	No

Need to increase size of EBS volume
Before increasing the size:


```
[root@ip-172-31-0-178 ~]# resize2fs dev/xvdb
resize2fs 1.42.9 (28-Dec-2013)
open: No such file or directory while opening dev/xvdb
[root@ip-172-31-0-178 ~]# resize2fs /dev/xvdb
resize2fs 1.42.9 (28-Dec-2013)
Filesystem at /dev/xvdb is mounted on /home/sobel: on-line resizing required
old_desc_blocks = 1, new_desc_blocks = 2
The filesystem on /dev/xvdb is now 3932160 blocks long.

[root@ip-172-31-0-178 ~]# lsblk
NAME        MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda        202:0    0  8G  0 disk
|xvda1      202:1    0  8G  0 part /
|xvdb       202:16   0 15G  0 disk /home/sobel
[root@ip-172-31-0-178 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        467M   0  467M   0% /dev
tmpfs           477M   0  477M   0% /dev/shm
tmpfs           477M 412K  476M   1% /run
tmpfs           477M   0  477M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.8G  6.3G  23% /
tmpfs          96M   0   96M   0% /run/user/1000
/dev/xvdb       15G  24K   14G   1% /home/sobel
[root@ip-172-31-0-178 ~]# []
```