

EC2 and EBS Assignment - 2

AWS Solutions Architect Training support@intellipaat.com

Module-2: EC2 and EBS Assignment - 2

You have been asked to:

1. Launch a Linux EC2 instance
2. Create a EBS volume with 20 GB of storage and attach it the created EC2 instance
3. Resize the attached volume and make sure it reflects in the connected instance

1. Launch a Linux EC2 Instance:

EC2 > Instances > Launch an instance

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

LinuxInstance

Add additional tags

Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Summary

Number of instances

1

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...read more

ami-01a4f99c4ac11b03c

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel

Launch instance

Key pair (login)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

KP1302

Create new key pair

EC2 and EBS Assignment - 2

2. Create an EBS volume with 20 GB of storage and attach it the created EC2 instance

Services

Search

[Alt+S]

Volume type

Info

General Purpose SSD (gp2)

Size (GiB)

Info

20

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

ap-south-1b

Snapshot ID - optional

Info

Don't create volume from a snapshot

Encryption

Info

Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.

☐ Encrypt this volume

| Volumes (1/2) | | | | | | | | | | | |
|-------------------------------------|------|-----------------------|------|--------|------|------------|-----------------|---------------------------|--|--|--|
| Search | | | | | | | | | | | |
| | Name | Volume ID | Type | Size | IOPS | Throughput | Snapshot | Created | | | |
| <input type="checkbox"/> | - | vol-0efab1423953fac6e | gp2 | 8 GiB | 100 | - | snap-0fdd5b8... | 2023/02/13 17:15 GMT+S... | | | |
| <input checked="" type="checkbox"/> | - | vol-032a665d4ec6e4404 | gp2 | 20 GiB | 100 | - | - | 2023/02/13 17:28 GMT+S... | | | |

Volume ID: vol-032a665d4ec6e4404

Details

Status checks

Monitoring

Tags

Details

Volume ID

vol-032a665d4ec6e4404

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations. | [Learn more](#)

Size

20 GiB

Volume state

Available

Type

gp2

IOPS

100

Volume status

Okay

Throughput

-


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Attaching volume to EC2:

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-032a665d4ec6e4404**

Availability Zone
ap-south-1b

Instance [Info](#)

i-011979956ea3f630c

▼




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


Device name [Info](#)


/dev/sdf



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**.


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

 [Connect](#) [Instance state ▼](#) [Actions ▼](#) [Launch instances](#) ▼



< 1 > 

| <input checked="" type="checkbox"/> | Name ▼ | Instance ID | Instance state ▼ | Instance type ▼ | Status check | Alarm status | Availability Zone ▼ | Public IPv4 DN |
|-------------------------------------|---------------|---------------------|---------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------|--------------|---------------------|----------------|
| <input checked="" type="checkbox"/> | LinuxInstance | i-011979956ea3f630c |  Running | t2.micro |  2/2 checks passed | No alarms + | ap-south-1b | ec2-15-206-16 |

Instance: i-011979956ea3f630c (LinuxInstance)

Root device name
 /dev/xvda

Block devices

| Volume ID | Device name | Volume size (GiB) | Attachment status | Attachment time | Encrypted | KMS key ID |
|-----------------------|-------------|-------------------|----------------------------------------------------------------------------------------------|-------------------------------|-----------|------------|
| vol-0efab1423953fac6e | /dev/xvda | 8 |  Attached | Mon Feb 13 2023 17:15:00 G... | No | - |
| vol-032a665d4ec6e4404 | /dev/sdf | 20 |  Attached | Mon Feb 13 2023 17:31:20 G... | No | - |

Root device type
EBS

EBS optimization
disabled

Recent root volume replacement tasks

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3. Resize the attached volume and make sure it reflects in the connected instance

[EC2](#) > [Volumes](#) > [vol-032a665d4ec6e4404](#) > **Modify volume**

Modify volume [Info](#)

Modify the type, size, and performance of an EBS volume.

Volume details

Volume ID
 [vol-032a665d4ec6e4404](#)

Volume type [Info](#)
General Purpose SSD (gp2) ▼

Size (GiB) [Info](#)

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.

[Cancel](#) [Modify](#)

Instances (1/1) [Info](#) [Refresh](#) [Connect](#) [Instance state](#) ▼ [Actions](#) ▼ [Launch instances](#) ▼

| <input checked="" type="checkbox"/> | Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv4 DN |
|-------------------------------------|---------------|---------------------|----------------|---------------|-------------------|--------------|-------------------|------------------|
| <input checked="" type="checkbox"/> | LinuxInstance | i-011979956ea3f630c | Running | t2.micro | 2/2 checks passed | No alarms | ap-south-1b | ec2-15-206-16... |

Instance: i-011979956ea3f630c (LinuxInstance) [Settings](#) [Close](#)

 /dev/xvda

EBS

disabled

Block devices

| Volume ID | Device name | Volume size (GiB) | Attachment status | Attachment time | Encrypted | KMS key ID |
|---------------------------------------|-------------|-------------------|-------------------|-------------------------------|-----------|------------|
| vol-0efab1423953fac6e | /dev/xvda | 8 | Attached | Mon Feb 13 2023 17:15:00 G... | No | — |
| vol-032a665d4ec6e4404 | /dev/sdf | 25 | Attached | Mon Feb 13 2023 17:31:20 G... | No | — |

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Mounting Volume on Linux Instance:

File system not available, so created file system as below:

```
[root@ip-172-31-1-45 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M   0% /dev
tmpfs           483M    0  483M   0% /dev/shm
tmpfs           483M  412K  482M   1% /run
tmpfs           483M    0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.8G  6.3G  22% /
tmpfs           97M    0   97M   0% /run/user/1000
[root@ip-172-31-1-45 ~]# 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  25G  0 disk
[root@ip-172-31-1-45 ~]# file -s /dev/xvdf
/dev/xvdf: data
[root@ip-172-31-1-45 ~]# mkfs -t xfs /dev/xvdf
meta-data=/dev/xvdf          isize=512    agcount=4, agsize=1638400 blks
                     =                       sectsz=512   attr=2, projid32bit=1
                     =                       crc=1     finobt=1, sparse=1, rmapbt=0
                     =                       reflink=1  bigtime=0 inobtcount=0
data        =                       bsize=4096  blocks=6553600, imaxpct=25
                     =                       sunit=0   swidth=0 blks
naming      =version 2           bsize=4096  ascii-ci=0, ftype=1
log         =internal log       bsize=4096  blocks=3200, version=2
                     =                       sectsz=512   sunit=0 blks, lazy-count=1
realtime    =none               extsz=4096  blocks=0, rtextents=0
[root@ip-172-31-1-45 ~]# file -s /dev/xvdf
/dev/xvdf: SGI XFS filesystem data (blksz 4096, inosz 512, v2 dirs)
```

Mounting And Unmounting the volume:

```
[root@ip-172-31-1-45 dev]# mount /dev/xvdf /dev/volume/my-volume/
[root@ip-172-31-1-45 dev]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M   0% /dev
tmpfs           483M    0  483M   0% /dev/shm
tmpfs           483M  412K  482M   1% /run
tmpfs           483M    0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.8G  6.3G  22% /
tmpfs           97M    0   97M   0% /run/user/1000
/dev/xvdf       25G   211M   25G   1% /dev/volume/my-volume
[root@ip-172-31-1-45 dev]# umount /dev/xvdf /dev/volume/my-volume/
umount: /dev/volume/my-volume/: not mounted.
[root@ip-172-31-1-45 dev]# df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        474M    0  474M   0% /dev
tmpfs           483M    0  483M   0% /dev/shm
tmpfs           483M  412K  482M   1% /run
tmpfs           483M    0  483M   0% /sys/fs/cgroup
/dev/xvda1      8.0G  1.8G  6.3G  22% /
tmpfs           97M    0   97M   0% /run/user/1000
```