

Module 2: Hands-On - AWS EBS Multi-Attach

Step 1: Create 2 or more instances which are built on the Nitro system. Choose C5/C5d or M5/M5d instances.

Note: These instances are not free tier eligible.

Filter by tags and attributes or search by keyword					
<input type="checkbox"/>	Name	Instance ID	Instance Type	Availability Zone	Instance State
<input type="checkbox"/>		i-0085bab59776193...	t2.micro	us-east-1b	terminated
<input type="checkbox"/>	multi1	i-03847ce682f6a36c4	c5n.large	us-east-1a	running
<input type="checkbox"/>	multi2	i-0abbd4137353907...	c5n.large	us-east-1a	running

Step 2: Go to Volumes under Elastic Block Store and click on Create Volume button

▼ Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

▼ Network & Security

Security Groups New

Elastic IPs New

Placement Groups New

Create Volume

Actions ▼

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name	Volume ID	Size	Volume Type
<input type="checkbox"/>		vol-00cdf1b4...	8 GiB	gp2
<input type="checkbox"/>		vol-0faa986f...	8 GiB	gp2

Step 3: Choose the **Provisioned IOPS** option because only then you will get a Multi-attach option. Choose the AZ as the one in which your EC2 instances are in. And the important part is to check the Multi-Attach box. Finally, click on create volume to initiate volume creation.

Create Volume

Volume Type
Provisioned IOPS SSD (io1) ⓘ

Size (GiB)

(Min: 4 GiB, Max: 16384 GiB) ⓘ

IOPS

(Min: 100 IOPS, Max: 64000 IOPS) ⓘ

Availability Zone*
us-east-1a ⓘ

Throughput (MB/s)
Not applicable ⓘ

Snapshot ID
Select a snapshot ⓘ

Multi-Attach
☒ Enable ⓘ

Key (128 characters maximum)
Value (256 characters maximum)

This resource currently has no tags

Choose the Add tag button or [click to add a Name tag](#)

Add Tag
50 remaining (Up to 50 tags maximum)

Cancel
Create Volume

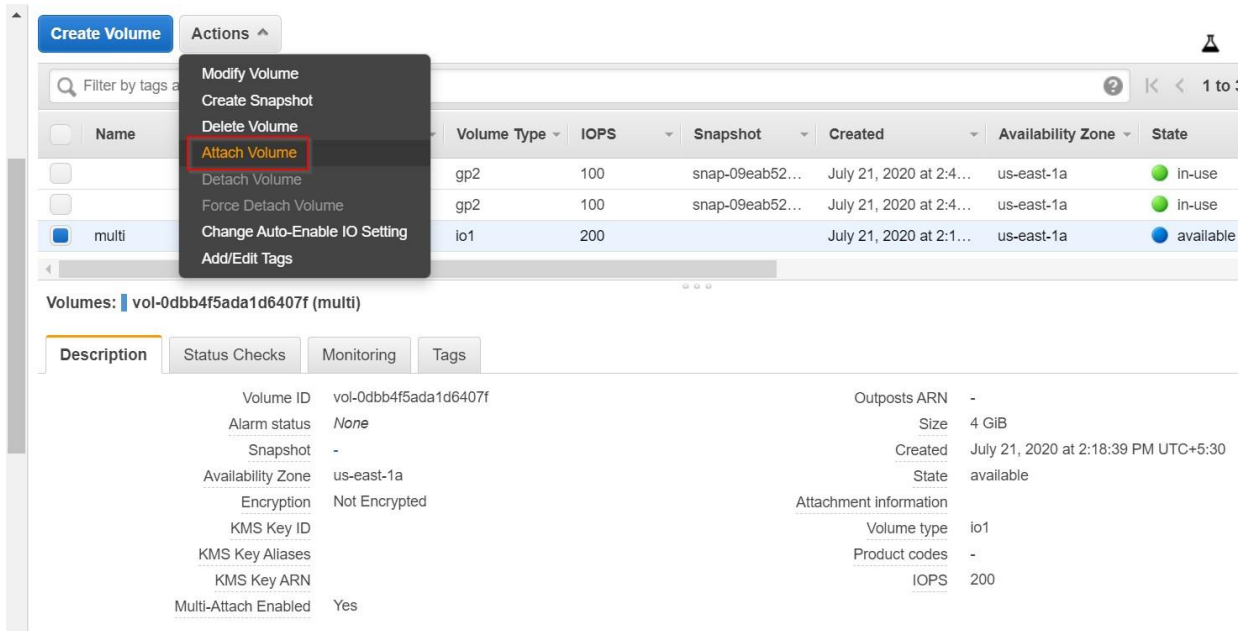
Step 4: Once created, naming your volume is optional. There are no instances attached currently to this volume which you can see under Attachment information.

Name	Volume ID	Size	Volume Type	IOPS	Snapshot	Created	Availability Zone	State
multi	vol-0dbb4f5ada1d6407f	4 GiB	io1	200		July 21, 2020 at 2:1...	us-east-1a	available

Volumes: **vol-0dbb4f5ada1d6407f (multi)**

Description	Status Checks	Monitoring	Tags
Volume ID	vol-0dbb4f5ada1d6407f	Outposts ARN	-
Alarm status	None	Size	4 GiB
Snapshot	-	Created	July 21, 2020 at 2:18:39 PM UTC+5:30
Availability Zone	us-east-1a	State	available
Encryption	Not Encrypted	Attachment information	
KMS Key ID		Volume type	io1
KMS Key Aliases		Product codes	-
KMS Key ARN		IOPS	200
Multi-Attach Enabled	Yes		

Step 5: Click on the Actions button after selecting the multi volume and choose Attach Volume.



Actions

- Modify Volume
- Create Snapshot
- Delete Volume
- Attach Volume**
- Detach Volume
- Force Detach Volume
- Change Auto-Enable IO Setting
- Add/Edit Tags

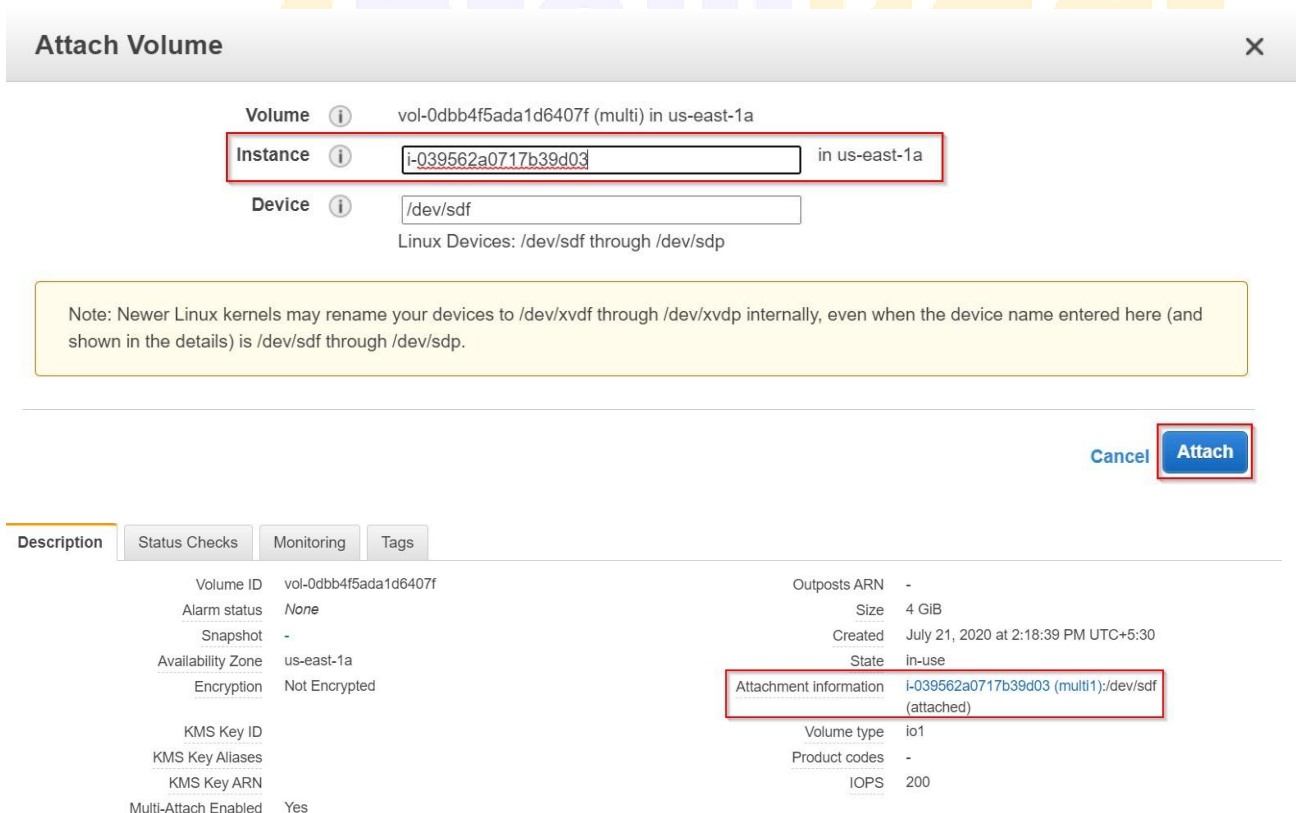
Name	Volume Type	IOPS	Snapshot	Created	Availability Zone	State
multi	gp2	100	snap-09eab52...	July 21, 2020 at 2:4...	us-east-1a	In-use
	gp2	100	snap-09eab52...	July 21, 2020 at 2:4...	us-east-1a	In-use
	io1	200		July 21, 2020 at 2:1...	us-east-1a	available

Volumes: **vol-0dbb4f5ada1d6407f (multi)**

Description

Volume ID	vol-0dbb4f5ada1d6407f	Outposts ARN	-
Alarm status	None	Size	4 GiB
Snapshot	-	Created	July 21, 2020 at 2:18:39 PM UTC+5:30
Availability Zone	us-east-1a	State	available
Encryption	Not Encrypted	Attachment information	
KMS Key ID		Volume type	io1
KMS Key Aliases		Product codes	-
KMS Key ARN		IOPS	200
Multi-Attach Enabled	Yes		

Step 6: If you click on the Instance field, you will get the available instance options and you can only select one at the same time. Then click on Attach and it is done. The volume will now be attached with one of your instances and here it is multi1.



Attach Volume

Volume **vol-0dbb4f5ada1d6407f (multi) in us-east-1a**

Instance **i-039562a0717b39d03 in us-east-1a**

Device **/dev/sdf**

Linux Devices: /dev/sdf through /dev/sdp

Note: 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**

Description

Volume ID	vol-0dbb4f5ada1d6407f	Outposts ARN	-
Alarm status	None	Size	4 GiB
Snapshot	-	Created	July 21, 2020 at 2:18:39 PM UTC+5:30
Availability Zone	us-east-1a	State	in-use
Encryption	Not Encrypted	Attachment information	i-039562a0717b39d03 (multi1)/dev/sdf (attached)
KMS Key ID		Volume type	io1
KMS Key Aliases		Product codes	-
KMS Key ARN		IOPS	200
Multi-Attach Enabled	Yes		

Step 7: Repeat Step 6 to attach the second instance as well. If you want to attach more instances, repeat the process again. In the below image, you can see both the instances are attached.

Attach Volume

Volume

vol-0dbb4f5ada1d6407f (multi) in us-east-1a

Instance

i-0d58ab72b163714c9

in us-east-1a

Device

/dev/sdf

Linux Devices: /dev/sdf through /dev/sdp

Note: 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

	multi	vol-0dbb4f5a...	4 GiB	io1	200	July 21, 2020 at 2:1...	us-east-1a	in-use	None
Volumes: vol-0dbb4f5ada1d6407f (multi)									
Description									
Volume ID	vol-0dbb4f5ada1d6407f								
Alarm status	None								
Snapshot	-								
Availability Zone	us-east-1a								
Encryption	Not Encrypted								
KMS Key ID									
KMS Key Aliases									
KMS Key ARN									
Outposts ARN	-								
Size	4 GiB								
Created	July 21, 2020 at 2:18:39 PM UTC+5:30								
State	in-use								
Attachment information	i-039562a0717b39d03 (multi1):/dev/sdf (attached), i-0d58ab72b163714c9 (multi2):/dev/sdf (attached)								
Volume type	io1								
Product codes	-								
IOPS	200								

After it is attached, it is the same process as to mount any EBS volume to an EC2 instance. The AMI can be of your choosing, Amazon Linux 2 or Ubuntu or any other Linux OS.