Increase the size of EBS volume in your EC2 instance

Yunan Helmy · Follow

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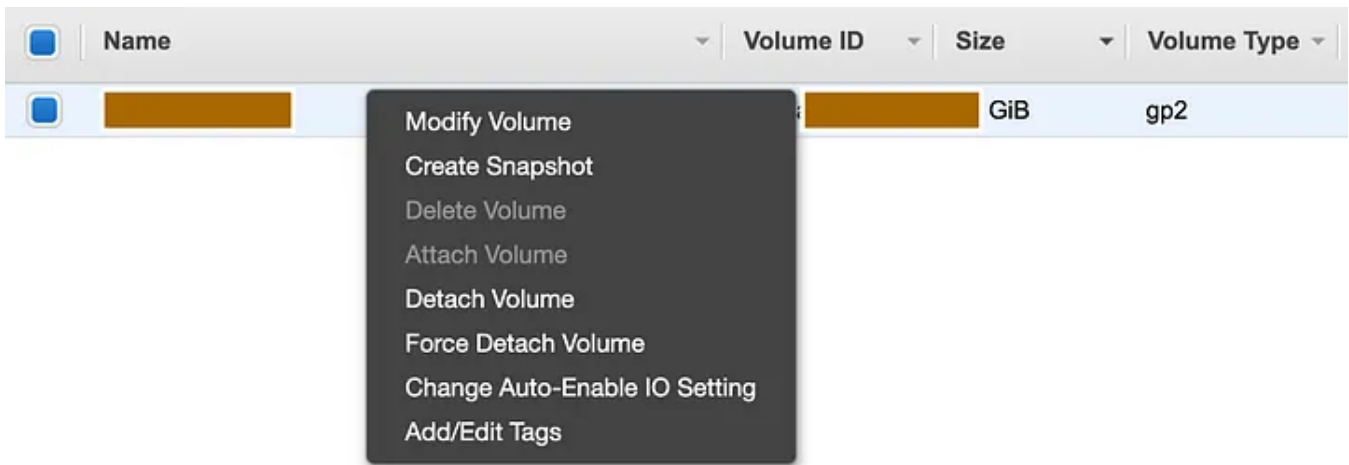(▶) Listen   [↑] Share   (•••) More

If you are familiar with Amazon EC2 and EBS volume, you might have experiences modifying the size of EBS volume. AWS provide an easy way to increase the size of your EBS volume. In fact, we could increase it without detaching the volume or restarting the instance. That's quite a nice work done there because we would not need to have a downtime for our instance.

Let's exercise. Assume we have volume name **my-volume.**

Create snapshot

It is best practice to create a snapshot of your volume in case something bad happens.

1. Go to your EBS volume list from your EC2 Dashboard.

2. Right click the volume.

3. Click **Create Snapshot** link.

4. Add the **description** value **snapshot-my-volume.**

5. Add **key : Name** and **value : snapshot-my-volume.**

6. Click button **Create Snapshot.**

7. Go grab some snack while it is in progress.

[2, 3] Right click on the volume

[4, 5, 6] Create snapshot

Increase the volume

This is how we will increase the volume size. Make sure your snapshot is finished.

Let's assume that previous volume size is **30GB** and we want increase it to **40GB.**

1. Right click on the volume you wish to increase.

2. Add your desired size; In our example type **40**.

3. Click **Modify**.

4. You will get confirmation to extend OS file system.

5. Click **Yes.**

Modify Volume   ✕

Volume ID ·

Volume Type   General Purpose SSD (gp2) ▾   ❶

Size   [ ]   (Min: 1 GiB, Max: 16384 GiB)   ❶

Iops   100 / 3000   (Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS)   ❶

Cancel   **Modify**

[2, 3] Increase volume

Modify Volume   ✕

Are you sure that you want to modify volume   **?**

It may take some time for performance changes to take full effect.

You may need to extend the OS file system on the volume to use any newly-allocated space.

Learn more about resizing an EBS volume on Linux and Windows.

Cancel   No   **Yes**

[4, 5] Confirmation to extend OS file system

Extending OS file system

After you finish modifying volume, you need to extend OS file system in order to see your increased volume size. The example below is the command I used for Ubuntu OS.

1. SSH into you instance.

2. Type `df -h` to check volume size; You will still have **30GB** of volume size.

3. Type `lsblk` ; Your increased volume will be shown just above your current volume, e.g. `xvda1` is your current volume with **30GB** size and `xvda` with **40GB** size.

4. Extend the partition by typing `sudo growpart /dev/xvda 1` ; Note that `dev/xvda` is the partition name and `1` is the partition number.

5. Extend the volume by typing `sudo resize2fs /dev/xvda1` .

6. Type `df -h` to check volume size; It will show **40GB** of volume size.

```
Filesystem      Size  Used Avail Use% Mounted on
udev            236M     0  236M   0% /dev
tmpfs            49M  4.8M   44M  10% /run
/dev/xvda1       30G  6.8G   23G  24% /
tmpfs           244M  8.0K  244M   1% /dev/shm
tmpfs           5.0M     0  5.0M   0% /run/lock
tmpfs           244M     0  244M   0% /sys/fs/cgroup
tmpfs            49M     0   49M   0% /run/user/1000
```

[2] The previous volume size before extending

```
NAME       MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
xvda       202:0    0  40G  0 disk
`-xvda1   202:1    0  30G  0 part /
ubuntu@              :~$
```

[3] lsblk show we could extend the partition

```
ubuntu@              :~$ sudo growpart /dev/xvda 1          xvda1 202:1    0   8G  0 part /
CHANGED: partition=1 start=2048 old: size=62912479 end=62914527 new: size=83883999,end=83886047
ubuntu@              :~$
```

[4] growpart show we have successfully extend the partition

```
ubuntu@              :~$ sudo resize2fs /dev/xvda1
resize2fs 1.42.13 (17-May-2015)
Filesystem at /dev/xvda1 is mounted on /; on-line resizing required
old_desc_blocks = 2, new_desc_blocks = 3
The filesystem on /dev/xvda1 is now 10485499 (4k) blocks long.
```

[5] resize2fs show we have successfully extend the volume

```
ubuntu@                    :~$ df -h
Filesystem          Size  Used Avail Use% Mounted on
udev                236M     0  236M   0% /dev
tmpfs                49M  4.8M   44M  10% /run
/dev/xvda1           39G  6.8G   32G  18% /
tmpfs               244M  8.0K  244M   1% /dev/shm
tmpfs               5.0M     0  5.0M   0% /run/lock
tmpfs               244M     0  244M   0% /sys/fs/cgroup
tmpfs                49M     0   49M   0% /run/user/1000
ubuntu@                    :~$
```

[6] the new size after extending

Conclusion

AWS provide a straightforward method to increase the volume size of EBS. We need to extend the OS file system in order to see the changes.

Hope it works!

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Create Volume

Volume Type	General Purpose SSD (gp2) ▼ ⓘ
Size (GiB)	30 (Min: 1 GiB, Max: 16384 GiB) ⓘ
IOPS	100 / 3000 (Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS) ⓘ
Availability Zone*	ap-southeast-1a ▼ ⓘ
Throughput (MB/s)	Not applicable ⊘ ⓘ
Snapshot ID	Select a snapshot ▼ C ⓘ
Encryption	☐ Encrypt this volume ⓘ

Key (127 characters maximum)	Value (255 characters maximum)	
Name		⊗

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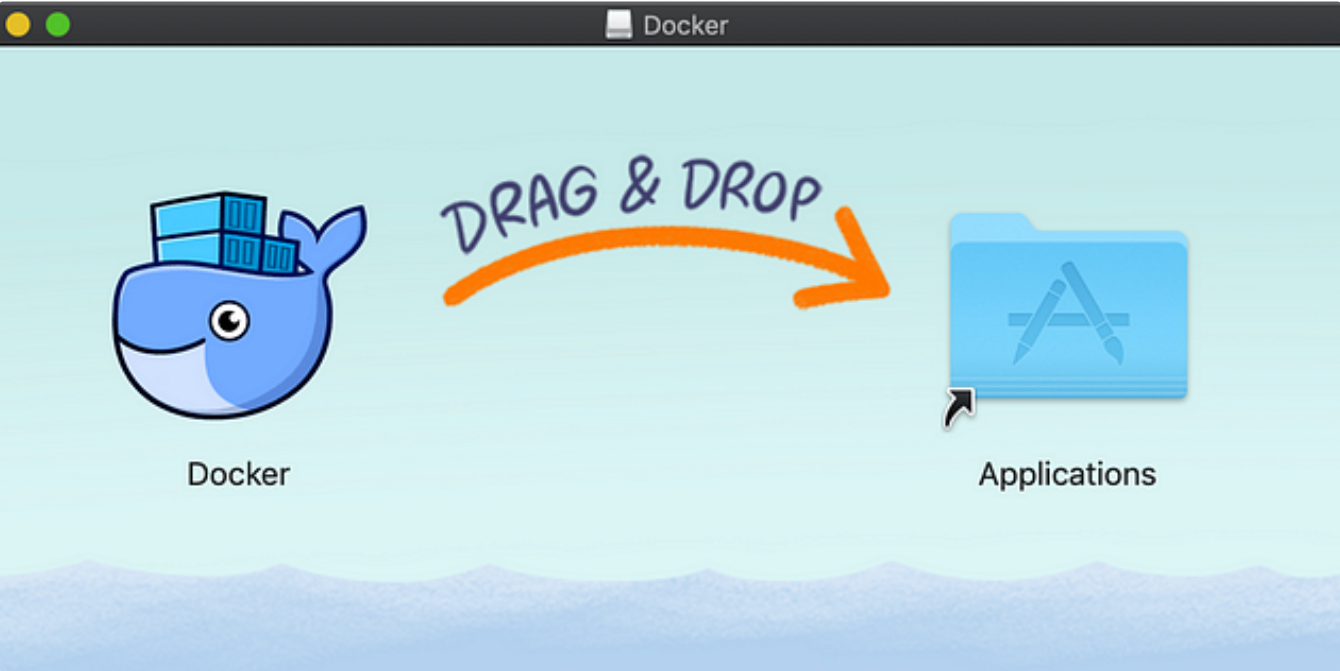You might be wondering, can we decrease EBS volume size?

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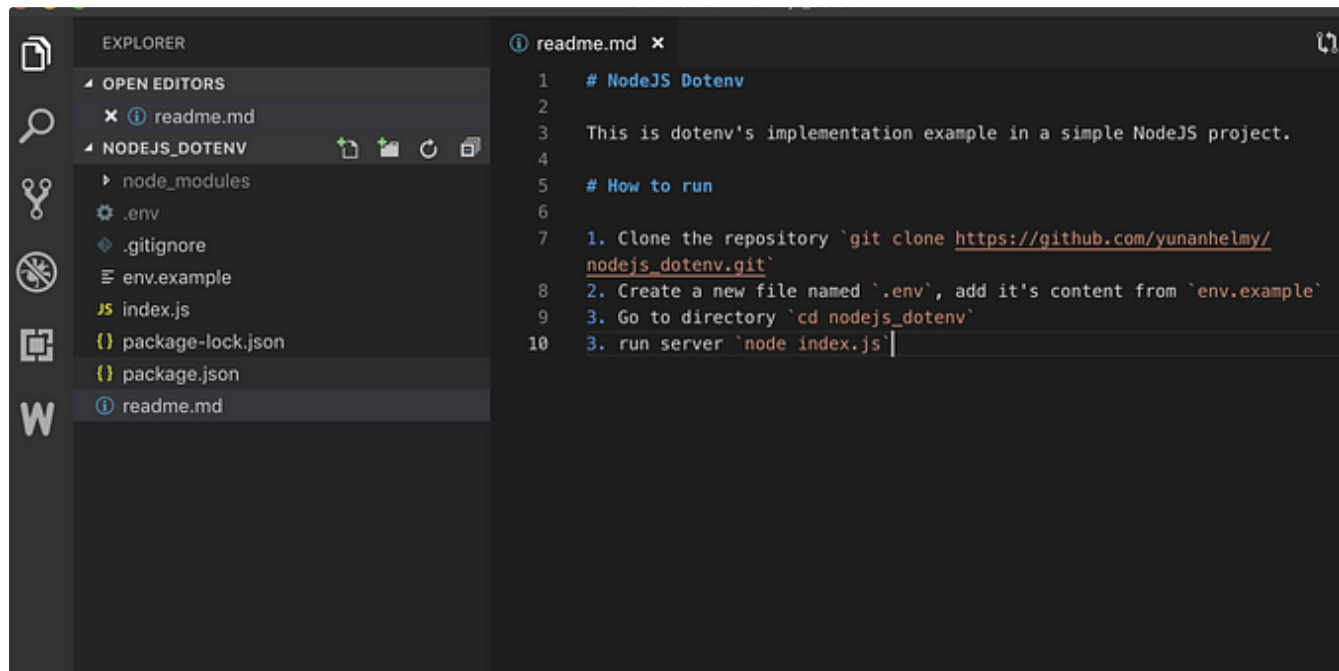
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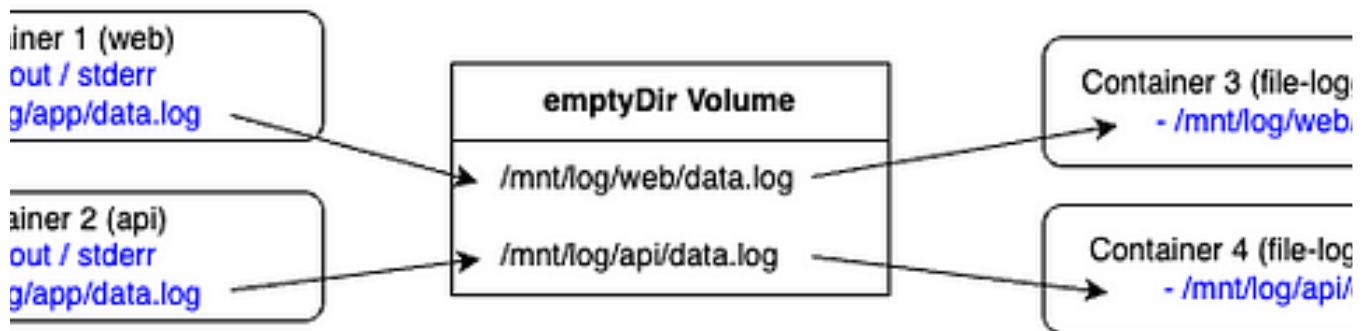2 min read · Apr 26, 2019

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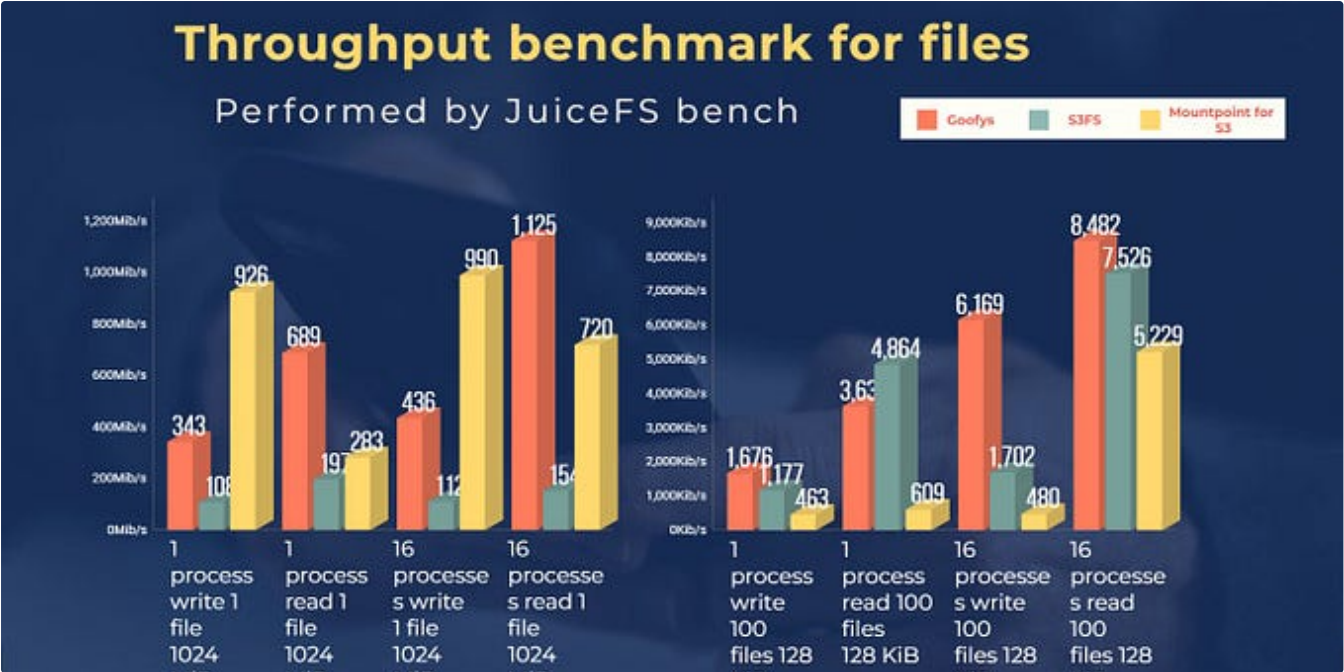**Natural Language Processing**
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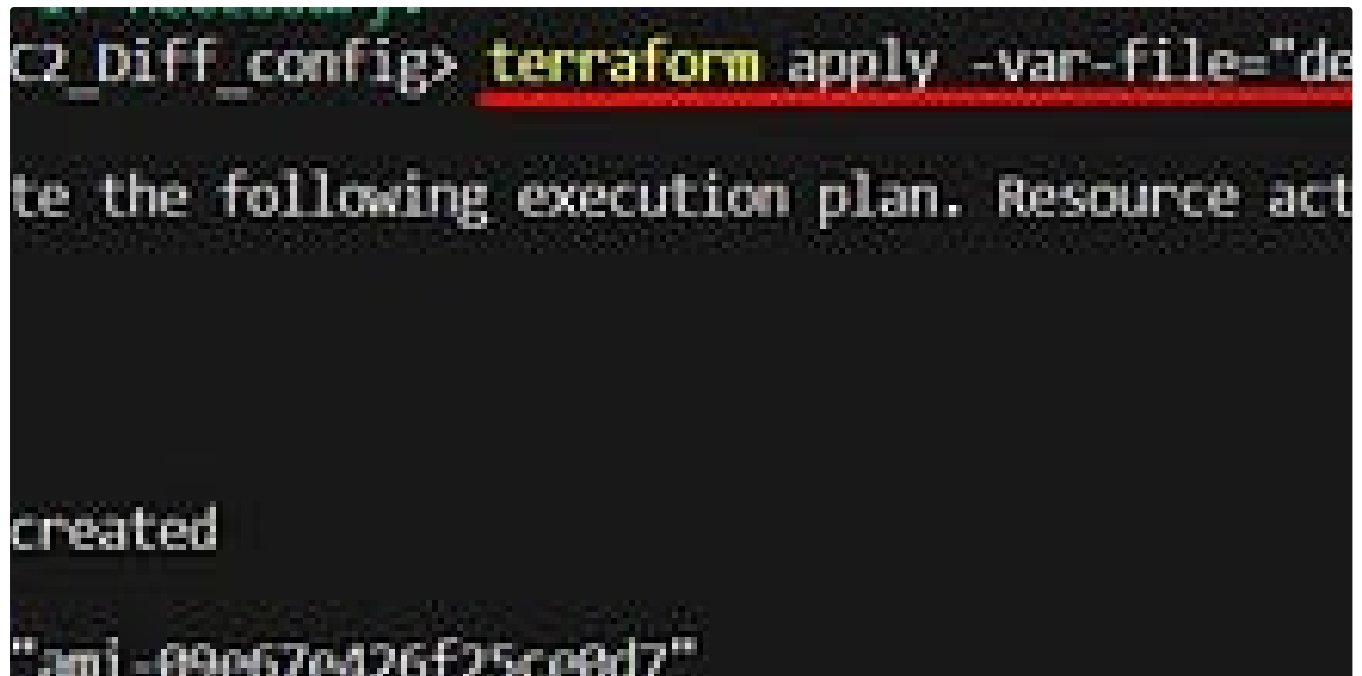👏 1.2K   💬 13   🔖⁺   •••

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