

How to use an EBS volume for ClustrixDB logs

Clustrix recommends using a separate volume to store the ClustrixDB logs as opposed to using the same volume as the database data. This prevents having the database and the logs compete for storage space and IO. With AWS, it is easy to add a small EBS volume to handle the logs. Here is how to proceed using the AWS console and ssh access to each ClustrixDB node:

Create the EBS volume

In the AWS console EC2> Volumes, select "Create Volume", and use the settings below:

- type: magnetic
- size: 50GB
- availability zone: pick the same one as the ClustrixDB node
- snapshot id: leave blank
- encryption: leave unchecked

Click Create. The volume will take a minute before it is available. Create a volume for each ClustrixDB node.

Attach the volume

Once ready, you can attach the volume to your ClustrixDB instance:

- select the volume you just created
- click Action > Attach Volume, fill the form with
 - instance : select the ClustrixDB node you want (you can search by id or tag name)
 - device: leave the default.
 - click Attach
- Repeat for each ClustrixDB node.

Setup the new volume

Once every node has an EBS volume attached, it needs to be set up on each node individually.

1. Find the EBS volume. Below we are using an m3.xl instance with 2 ephemeral disks (xvdb and xvdc) that are in a raid0 (md0) used as a data volume.

```
$ cat /proc/partitions
major minor #blocks name
202      0    8389632 xvda
202      1    8389600 xvda1
202     16   39313408 xvdb
202     32   39313408 xvdc
  9      0    78561280 md0
202     80   52428800 xvdf    <== this is the EBS volume
```

2. Stop the database (this will stop the database on the node, and if clustered, on every node of the cluster).

```
$ clx dbstop
```

3. Format the volume with ext4.

```
$ mkfs -t ext4 /dev/xvdf
```

4. Create mount point, label the volume, update fstab, and mount the volume.

```
$ mkdir -p /var/log/clustrix
$ e2label /dev/xvdf CLUSTRIX-LOG
$ echo 'LABEL=CLUSTRIX-LOG /var/log/clustrix ext4 defaults,noatime,nodiratime 0 2' >> /etc/fstab
$ mount -a
```

5. Move the old log directory to the new one.

```
$ mv /data/clustrix/log/* /var/log/clustrix/.
```

6. Create a symlink to the old directory (avoids config changes).

```
$ rm -rf /data/clustrix/log
$ ln -s /var/log/clustrix/ /data/clustrix/log
```

7. Check that everything worked.

```
$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/xvda1     7.8G  1.5G  5.9G  21% /
/dev/md0        74G   2.0G   68G   3% /data/clustrix
/dev/xvdf       50G   53M   47G   1% /var/log/clustrix
$ ls -l /data/clustrix/log
lrwxrwxrwx. 1 root root 11 Aug  7 15:04 /data/clustrix/log -> /var/log/clustrix/
```

8. Proceed with step 3 through 6 on all the other ClustrixDB nodes.

9. Start the database.

```
$ clx dbstart
```