

Memory Management

Setup additional swap space in the system to solve low memory issue. The swap which you added should be available post reboot.

swapon --show

free -h

```
ubuntu@ip-172-31-8-251: ~  
ubuntu@ip-172-31-8-251:~$ swapon --show  
ubuntu@ip-172-31-8-251:~$ free -h  
Mem:          total        used        free      shared  buff/cache   available  
Swap:           0B           0B           0B  
Mem: 957Mi      355Mi      315Mi      5.9Mi      450Mi      601Mi  
Swap: 0B         0B         0B
```

sudo fallocate -l 2G /swapfile

sudo mkswap /swapfile

sudo swapon /swapfile

Making the file persistent after reboot

sudo nano /etc/fstab

/swapfile none swap sw 0 0

sudo reboot

swapon --show

free -h

```
ubuntu@ip-172-31-8-251:~$ swapon --show  
ubuntu@ip-172-31-8-251:~$ sudo nano /etc/fstab  
ubuntu@ip-172-31-8-251:~$ sudo reboot  
  
Broadcast message from root@ip-172-31-8-251 on pts/2 (Wed 2024-12-04 17:14:50 UTC):  
  
The system will reboot now!  
  
ubuntu@ip-172-31-8-251:~$ Read from remote host ec2-3-107-19-191.ap-southeast-2.compute.amazonaws.com: C  
Connection reset by peer  
Connection to ec2-3-107-19-191.ap-southeast-2.compute.amazonaws.com closed.  
client_loop: send disconnect: Connection reset by peer  
  
De11@DESKTOP-8E3LP2E MINGW64 ~/Downloads  
$ ssh -i "disha.pem" ubuntu@ec2-3-107-19-191.ap-southeast-2.compute.amazonaws.com  
ssh: connect to host ec2-3-107-19-191.ap-southeast-2.compute.amazonaws.com port 22: Connection timed out  
  
De11@DESKTOP-8E3LP2E MINGW64 ~/Downloads  
$ ssh -i "disha.pem" ubuntu@ec2-3-107-19-191.ap-southeast-2.compute.amazonaws.com  
Last login: Wed Dec 4 16:35:15 2024 from 223.231.143.39  
ubuntu@ip-172-31-8-251:~$ swapon --show  
free -h  
Mem:          total        used        free      shared  buff/cache   available  
Swap:           0B           0B           0B  
Mem: 957Mi      360Mi      313Mi      2.9Mi      436Mi      596Mi  
Swap: 0B         0B         0B  
ubuntu@ip-172-31-8-251:~$
```

Find out the number of process is in run queue and blocking queue.

Processes in the Run Queue

vmstat 1 1 | awk 'NR==3 {print \$1}'

Processes in the Blocking Queue

ps -eo state | grep -c '^D'

```
ubuntu@ip-172-31-8-251:~$ vmstat 1 1 | awk 'NR==3 {print $1}'  
1  
ubuntu@ip-172-31-8-251:~$ ps -eo state | grep -c '^D'  
0  
ubuntu@ip-172-31-8-251:~$ |
```