

- * Problem: Can't run a container app because of insufficient memory.
- * Logs: There is insufficient memory for the Java Runtime Environment to continue. Cannot create GC thread. Out of system resources.
- * Task: Free some memory.

Steps to solve the problem:

1- check the memory by "**free -m**" command

2- check the process running to see what is consumed from the system resources by "top" command or can see the most process consume memory direct by:

ps aux --sort=-%mem | head -n 10

3- in this case i found most of the memory and swap used so i decide to increase the swap by the following commands:

- **free -m** >> to check memory and swap
- **mkdir swap** >> to make directory to store the swap-file
- **cd swap/** >> to go inside the dir
- **dd if=/dev/zero of=/home/hypercell/swap-file bs=1G count=4** >> make a swap-file
- **ls -lh** >> to ensure that the file size is ok
- **mkswap swap-file** >> to setup the linux swap filesystem to the file
- **sudo chown root swap-file** >> to make the ownership of the file to root for security
- **sudo chmod 0600 swap-file** >> change the permission to be for the root only
- **ls -l** >> to ensure that the ownership and the permissions applied successfully
- **sudo swapon swap-file** >> to on the swap
- **swapon --show** >> to make sure that the swap-file added to the swap of the system
- **free -m** >> check the memory again

```
[hypercell@localhost swap]$ sudo swapon --show
NAME                                TYPE      SIZE  USED  PRI0
/dev/dm-1                          partition 15.7G 15.6G  -2
/home/hypercell/swap/swap-file     file      4G    0B    -3
[hypercell@localhost swap]$
[hypercell@localhost swap]$
[hypercell@localhost swap]$
[hypercell@localhost swap]$ free -m
              total        used          free      shared  buff/cache   available
Mem:           31931        30396           453           9        1081        1133
Swap:           20159        15951          4208
[hypercell@localhost swap]$
```

Final Result: 4G of swap is Added.