

# high swap space utilization in LINUX

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## high swap space utilization in LINUX

**This morning, I got a ticket that one LINUX machine is about to consume all its swap space..... I addressed this ticket very much like I would do it if this was AIX – only the commands to resolve this situations have different names. The general idea and the flow of action is identical.**

First, check swap space usage.

```
1
2                                     # free -h
3
4                                     total   used    free   shared  buffers
5                                     cached
6
7                                     Mem:    15G    15G    349M    444K
8                                     186M    14G
```

```
-/+ buffers/cache: 752M 14G
Swap: 3.9G 3.7B 0.2G
```

How many swap spaces we are dealing with.....?

```
1 # swapon -s -v
2
3 Filename Type Size
Used Priority
/dev/dm-1 partition 4095996
0 -2
```

How it is named in /etc/fstab?

```
1 # grep swap /etc/fstab
2
/dev/mapper/vg_sys-lv_swap swap
swap defaults 0 0
```

Any room left in “vg-sys” for a second swap volume?

```
1
```

```
2 # vgs
3 VG #PV #LV #SN Attr VSize VFree
4 vg_data 1 2 0 wz--n- 400.00g 1020.00m
vg_sys 1 7 0 wz--n- 34.61g 8.19g
```

There is space, so let's create a second swap volume with 6GB. This will be a temporary volume that will be deleted later.

```
1 # lvcreate -n swap2 -L 6G vg_sys
2
3 Logical volume "swap2" created.
```

Let's turn it into another swap area.

```
1 # # mkswap /dev/mapper/vg_sys-swap2
2
3 mkswap: /dev/mapper/vg_sys-swap2: warning: don't
4 erase bootbits sectors
5
6 on whole disk. Use -f to force.
7
8 Setting up swappiness version 1, size = 6291452 KiB
9
10 no label, UUID=eff630c2-e516-4e5e-
11 a9fe-28cee7b46b1a
```

Now, let shake the contents of swap aka let's kick them back to RAM via the new swap volume just made. Note, that the swap2 is activated before swap is deactivated...

Do otherwise and kernel may kill some very important to you processes.

```
1  
# swapon /dev/mapper/vg_sys-swap2 && swapoff  
/dev/mapper/vg_sys-swap
```

Monitor, wait till swap2 stabilizes and reverse the last action.

```
1  
# swapon /dev/mapper/vg_sys-swap && swapoff  
/dev/mapper/vg_sys-swap2
```

Monitor swap and when it stabilizes and it is empty or almost empty remove swap2 and its infrastructure.

```
1  
# lvremove /dev/mapper/vg_sys-swap2  
2  
Do you really want to remove active logical volume  
3 swap2? [y/n]: y  
  
Logical volume "swap2" successfully removed
```

The proverbial icing on a cake is this little snippet (I found today on the net) – it lists swap usage per a running processes.

```
1
2                                     # for file in /proc/*/status ; do awk
3                                     '/VmSwapName/{printf $2 " " $3}END{ print ""}'
4                                     $file; done | sort -k 2 -n -r | less
5
6                                     rsyslogd 3488 kB
7
8                                     filebeat 1364 kB
9
10                                    abrtcd 996 kB
11
12                                    cupsd 940 kB
13
14                                    master 828 kB
15
16                                    qmgr 820 kB
17
18                                    sshd 640 kB
19
20                                    certmonger 576 kB
21
22                                    crond 520 kB
23
24                                    hald 484 kB
25
26                                    udevd 476 kB
27
28                                    udevd 476 kB
29
30                                    rpc.mountd 476 kB
```

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