high swap space utilization in LINUX

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

```
-/+ buffers/cache:      752M      14G

Swap:      3.9G      3.7B    0.2G
```

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

```
1
                        # swapon -s -v
2
                        Filename                    Type        Size
3                       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
                                                     Logical volume "swap2" created.
```

Let's turn it into another swap area.

```
1
                                                   # # mkswap /dev/mapper/vg_sys-swap2
2
                                                   mkswap: /dev/mapper/vg_sys-swap2: warning: don't
3                                                  erase bootbits sectors

4                                                      on whole disk. Use -f to force.

5                                                  Setting up swapspace version 1, size = 6291452 KiB

                                                   no label, UUID=eff630c2-e516-4e5e-
                                                   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 it infrastructure.

```
1                                      # lvremove /dev/mapper/vg_sys-swap2

2                                      Do you really want to remove active logical volume
                                       swap2? [y/n]: y
3
                                         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.

```
# for file in /proc/*/status ; do awk '/VmSwap|Name/{printf $2 " " $3}END{ print ""}' $file; done | sort -k 2 -n -r | less

rsyslogd 3488 kB

filebeat 1364 kB

abrtd 996 kB

cupsd 940 kB

master 828 kB

qmgr 820 kB

sshd 640 kB

certmonger 576 kB

crond 520 kB

hald 484 kB

udevd 476 kB

udevd 476 kB

rpc.mountd 476 kB
```

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