Clear swap

DO NOT DO unless you need to.

https://www.redhat.com/sysadmin/clear-swap-linux

- free -h - see how much is in swap
- --- ADD IN - use vmstat to see if there is anything swapping. Clearing swap could make the system unstable.
  - watch vmstat -w (-w for wide format) or vmstat 1
  - Leave it running a few seconds to settle down and watch the si (swapin) and so (swapout) columns. If nothing is happening then there is no reason to be concerned.

Example:

```
procs -----------memory---------- ---swap-- -----io---- -system-- ------cpu-----
 r    b   swpd       free            buff     cache      si   so    bi    bo   in   cs us sy id wa st
16  0 3473100 110923808  82556 51383108    0    0   137   232    0    0 10  4 86  0  0
26  0 3473100 110905648  82572 51398696   16    0    16  2996 128943 144776 22  5 73  0  0
16  0 3473100 110842864  82708 51421948   96    0    96  3676 110092 142389 16  4 80  0  0
21  0 3472844 110826512  82828 51242668   60    0    88  6244 127121 157627 18  5 77  0  0
10  0 3472844 111036944  82988 51259556   12    0    12  3536 150377 164434 23  6 71  0  0
22  1 3472588 125886384   3012 35956808  364    0 156388  4252 203500 251567 22 10 68  0  0
22  0 3472076 133074160   3036 28729952  120    0 75392 12926 121207 145738 22  7 71  0  0
43  0 3471820 141850528   3052 19837756  212    0 40644  2764 127439 151745 26  8 66  0  0
42  0 3471820 147322656   3060 14291916   16    0 70256 10574 134497 153285 30  9 61  0  0
26  0 3471820 148134640   3084 14321300    4    0 41464  5392 179984 153028 24 10 66  0  0
66  1 3471564 148253984   3100 14225100   68    0 91992  5400 120002 138400 29  9 62  1  0
```

----si column showing swap bytes in... so is bytes out.

```
[root@tufin tufin-admin]#  vmstat -w 1
procs -----------------------memory---------------------- ---swap-- -----io---- -system-- --------cpu--------
 r  b         swpd         free         buff        cache   si   so    bi    bo   in   cs  us  sy  id  wa  st
33  0      3470284    147925360         6140     14868240    0    0   137   232    0    0  10   4  86   0   0
14  0      3470284    147936784         6172     14886708    0    0  1572 72876 156991 174881  17   6  76   0   0
13  0      3470284    148078880         6180     14912452    0    0  1492  2796 158460 182717  17   7  76   0   0
25  0      3470284    148136064         6220     14937492    0    0  1460 10436 151477 172876  20   7  72   0   0
24  0      3470284    148235920         6220     14963692    0    0  1704  8368 130827 145740  18   7  75   0   0
12  2      3470284    148188880         6252     14990336    0    0  1708 43997 164030 184616  21   8  71   0   0
15  0      3470284    148227616         6260     15016048    0    0  1092 163932 137640 155107  20   6  74   0   0
```

- swapoff -a

  Wait approx 30 sec

  (use free -m to see the amount of swap used/available decrease over time)
- swapon -a

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https://askubuntu.com/questions/1357/how-to-empty-swap-if-there-is-free-ram

I've found that emptying swap can help a lot on systems with slow disks and limited RAM. Of course, as already mentioned, the way to do this is to run sudo swapoff -a; sudo swapon -a. The problem here is that if there's insufficient RAM, doing so will cause all sorts of problems.

I've written a script that I call toggle_swap that has worked for me for the last several years. It checks for enough free RAM before actually disabling the swap. Here it is:

```
#!/bin/bash

free_data="$(free)"
mem_data="$(echo "$free_data" | grep 'Mem:')"
free_mem="$(echo "$mem_data" | awk '{print $4}')"
buffers="$(echo "$mem_data" | awk '{print $6}')"
cache="$(echo "$mem_data" | awk '{print $7}')"
total_free=$((free_mem + buffers + cache))
used_swap="$(echo "$free_data" | grep 'Swap:' | awk '{print $3}')"

echo -e "Free memory:\t$total_free kB ($((total_free / 1024)) MB)\nUsed swap:\t$used_swap kB ($((used_swap / 1024)) MB)"
if [[ $used_swap -eq 0 ]]; then
   echo "Congratulations! No swap is in use."
elif [[ $used_swap -lt $total_free ]]; then
   echo "Freeing swap..."
   sudo swapoff -a
   sudo swapon -a
else
   echo "Not enough free memory. Exiting."
   exit 1
fi
```