How to Create Swap Partition ?

Step-1   First verfiy the all swap partition with harddisk status


```
[root@localhost ~]# free  -h
              total        used         free       shared  buff/cache
available
Mem:         3.7Gi        1.2Gi        1.7Gi        15Mi        781Mi
2.2Gi
Swap:        2.0Gi          0B        2.0Gi
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                        Type        Size Used Priority
/dev/sda3                               partition  2047996    0
      -2
[root@localhost ~]#
[root@localhost ~]# lsblk
NAME   MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda      8:0    0   30G  0 disk
â”œâ”€sda1  8:1    0 1000M  0 part /boot
â”œâ”€sda2  8:2    0 14.7G  0 part /
â””â”€sda3  8:3    0    2G  0 part [SWAP]
sr0     11:0    1  6.6G  0 rom  /run/media/root/RHEL-8-0-0-BaseOS-
x86_64
[root@localhost ~]#
```


step-2-Go into your hardisk and create a new partition (it can be a
primay or can be a logical)


```
[root@localhost ~]# fdisk /dev/sda

Welcome to fdisk (util-linux 2.32.1).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.


Command (m for help): n
Partition type
   p   primary (3 primary, 0 extended, 1 free)
   e   extended (container for logical partitions)
Select (default e): e

Selected partition 4
First sector (36866048-62914559, default 36866048):
Last sector, +sectors or +size{K,M,G,T,P} (36866048-62914559, default
62914559):
```

```
Created a new partition 4 of type 'Extended' and of size 12.4 GiB.

Command (m for help):


Command (m for help): p

Disk /dev/sda: 30 GiB, 32212254720 bytes, 62914560 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xf085a991

Device     Boot     Start       End  Sectors  Size Id Type
/dev/sda1  *         2048   2050047  2048000 1000M 83 Linux
/dev/sda2          2050048 32770047 30720000 14.7G 83 Linux
/dev/sda3         32770048 36866047  4096000    2G 82 Linux swap /
Solaris
/dev/sda4         36866048 62914559 26048512 12.4G  5 Extended

Command (m for help):


Command (m for help): n

All primary partitions are in use.
Adding logical partition 5
First sector (36868096-62914559, default 36868096):
Last sector, +sectors or +size{K,M,G,T,P} (36868096-62914559, default
62914559): +1G

Command (m for help): p

Disk /dev/sda: 30 GiB, 32212254720 bytes, 62914560 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xf085a991

Device     Boot     Start       End  Sectors  Size Id Type
/dev/sda1  *         2048   2050047  2048000 1000M 83 Linux
/dev/sda2          2050048 32770047 30720000 14.7G 83 Linux
/dev/sda3         32770048 36866047  4096000    2G 82 Linux swap /
Solaris
/dev/sda4         36866048 62914559 26048512 12.4G  5 Extended
/dev/sda5         36868096 38965247  2097152    1G 83 Linux

Command (m for help):
Command (m for help): t
```

```
Partition number (1-5, default 5): 5
Hex code (type L to list all codes): l
Hex code (type L to list all codes): 82

Changed type of partition 'Linux swap / Solaris' to 'Linux swap /
Solaris'.

Command (m for help):
Command (m for help): p

Disk /dev/sda: 30 GiB, 32212254720 bytes, 62914560 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xf085a991

Device     Boot    Start       End   Sectors  Size Id Type
/dev/sda1  *        2048   2050047   2048000 1000M 83 Linux
/dev/sda2        2050048  32770047  30720000 14.7G 83 Linux
/dev/sda3       32770048  36866047   4096000    2G 82 Linux swap /
Solaris
/dev/sda4       36866048  62914559  26048512 12.4G  5 Extended
/dev/sda5       36868096  38965247   2097152    1G 82 Linux swap /
Solaris

Command (m for help): w
The partition table has been altered.
Syncing disks.

[root@localhost ~]#




Step-3    update your partition table without reboot your machine....


[root@localhost ~]# partprobe   /dev/sda      {support till rhel-7}

                    OR

[root@localhost ~]# udevadm    settle                {New command in
rhel-8}


Step-4-      Create the swap partition and activate it

[root@localhost ~]# mkswap     /dev/sda5
Setting up swapspace version 1, size = 1024 MiB (1073737728 bytes)
no label, UUID=ceae22f0-523d-43c5-80f6-8b4faa9e6c8e
[root@localhost ~]#
```

```
[root@localhost ~]#
[root@localhost ~]# swapon  /dev/sda5


[root@localhost ~]# swapon  -s
Filename                        Type        Size Used Priority
/dev/sda3                               partition  2047996    0
      -2
/dev/sda5                               partition  1048572    0
      -3

[root@localhost ~]# free -h
              total        used        free      shared  buff/cache
available
Mem:          3.7Gi       1.2Gi       1.9Gi        18Mi       627Mi
2.2Gi
Swap:         3.0Gi          0B       3.0Gi
[root@localhost ~]#


Step-5    now perform the permanent mounting step ...

[root@localhost ~]# vim  /etc/fstab

add this line bottom of this file............

/dev/sda5                                  swap                    swap
defaults       0 0

save and quit from this file.

[root@localhost ~]# mount  -a
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# systemctl daemon-reload

[root@localhost ~]# free  -h
              total        used        free      shared  buff/cache
available
Mem:          3.7Gi       1.2Gi       1.8Gi        19Mi       638Mi
2.2Gi
Swap:         3.0Gi          0B       3.0Gi
[root@localhost ~]#
[root@localhost ~]# cat  /proc/swaps
Filename                        Type        Size Used Priority
/dev/sda3                               partition2047996    0    -2
/dev/sda5                               partition1048572    0    -3
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# cat /proc/meminfo  | grep -i swap
SwapCached:            0 kB
SwapTotal:       3096568 kB
```

```
SwapFree:        3096568 kB


****************************************************************
*************


how to remove Swap partition step by step...... ?



[root@localhost ~]# swapoff    /dev/sda5
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                    Type       Size Used Priority
/dev/sda3                              partition 2047996    0
      -2
[root@localhost ~]#
[root@localhost ~]# swapon    /dev/sda5
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                    Type       Size Used Priority
/dev/sda3                              partition 2047996    0
      -2
/dev/sda5                              partition 1048572    0
      -3
[root@localhost ~]#
[root@localhost ~]# swapoff   -a
[root@localhost ~]#
[root@localhost ~]# swapon  -s
[root@localhost ~]#
[root@localhost ~]# swapon   -a
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                    Type       Size Used Priority
/dev/sda3                              partition 2047996    0
      -2
/dev/sda5                              partition 1048572    0
      -3
[root@localhost ~]#

[root@localhost ~]# swapoff    /dev/sda5
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                    Type       Size Used Priority
/dev/sda3                              partition 2047996    0
      -2
[root@localhost ~]#
[root@localhost ~]# vim  /etc/fstab


delete the  last line from this fgile.
```

```
:wq

root@localhost ~]# mount -a
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# free  -h
              total        used        free      shared  buff/cache
available
Mem:          3.7Gi       1.2Gi       1.9Gi        19Mi       637Mi
2.2Gi
Swap:         2.0Gi          0B       2.0Gi
[root@localhost ~]#


[root@localhost ~]# fdisk /dev/sda

Welcome to fdisk (util-linux 2.32.1).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.


Command (m for help): d
Partition number (1-5, default 5): 5

Partition 5 has been deleted.

Command (m for help): d
Partition number (1-4, default 4): 4

Partition 4 has been deleted.

Command (m for help): w



The partition table has been altered.
Syncing disks.

[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# udevadm    settle


************************************** Completed
*************************
```

how to Create SWAP by using FILE method   ?

Types of Swap creation method ?

1- By using partition

2- by using File with the help of dd command


```
[root@localhost ~]# df -h
Filesystem       Size  Used Avail Use% Mounted on
devtmpfs         1.9G     0  1.9G   0% /dev
tmpfs            1.9G     0  1.9G   0% /dev/shm
tmpfs            1.9G  9.9M  1.9G   1% /run
tmpfs            1.9G     0  1.9G   0% /sys/fs/cgroup
/dev/sda2         15G  3.9G   11G  27% /
/dev/sda1        994M  165M  830M  17% /boot
tmpfs            376M   16K  376M   1% /run/user/42
tmpfs            376M  4.6M  372M   2% /run/user/0
/dev/sr0         6.7G  6.7G     0 100% /run/media/root/RHEL-8-0-0-
BaseOS-x86_64
[root@localhost ~]#
[root@localhost ~]# dd  if=/dev/zero   of=/swapfile  bs=1G  count=1
1+0 records in
1+0 records out
1073741824 bytes (1.1 GB, 1.0 GiB) copied, 7.95487 s, 135 MB/s
[root@localhost ~]#
[root@localhost ~]# ls  /
bin  boot  dev  etc  home  lib  lib64  media  mnt  opt  proc  root
run  sbin  srv  swapfile  sys  tmp  usr  var
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# du -sh   /swapfile
1.0G /swapfile
[root@localhost ~]# file  /swapfile
/swapfile: data
[root@localhost ~]#
[root@localhost ~]# mkswap  -v1   -f   /swapfile
mkswap: /swapfile: insecure permissions 0644, 0600 suggested.
Setting up swapspace version 1, size = 1024 MiB (1073737728 bytes)
no label, UUID=49f5f56a-6614-4e83-b5f0-50afb18aedc8
[root@localhost ~]#
[root@localhost ~]# swapon    /swapfile
swapon: /swapfile: insecure permissions 0644, 0600 suggested.
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# chmod   600  /swapfile
[root@localhost ~]#
```

```
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                      Type        Size Used Priority
/dev/sda3                          partition 2047996    524
     -2
/swapfile                          file       1048572    0
     -3
[root@localhost ~]#
[root@localhost ~]# free  -h
            total        used        free      shared  buff/cache
available
Mem:        3.7Gi       1.2Gi       1.1Gi        19Mi       1.4Gi
2.2Gi
Swap:       3.0Gi       0.0Ki       3.0Gi
[root@localhost ~]#
[root@localhost ~]# vim  /etc/fstab


/swapfile                          swap                swap
defaults   0 0

save and quit

[root@localhost ~]# mount  -a


how to Remove Swap file  ?..........................

[root@localhost ~]# swapoff    /swapfile
[root@localhost ~]#
[root@localhost ~]# swapon  -s
Filename                      Type        Size Used Priority
/dev/sda3                          partition 2047996    272
     -2
[root@localhost ~]#
[root@localhost ~]# vim  /etc/fstab

delete the last line

save and quit.

[root@localhost ~]# mount -a
[root@localhost ~]#
[root@localhost ~]# file /swapfile
/swapfile: Linux/i386 swap file (new style), version 1 (4K pages),
size 262143 pages, no label, UUID=49f5f56a-6614-4e83-b5f0-50afb18aedc8
[root@localhost ~]#
[root@localhost ~]# rm -rf  /swapfile
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# df  -h
```

```
Filesystem        Size   Used Avail Use% Mounted on
devtmpfs          1.9G      0  1.9G   0% /dev
tmpfs             1.9G      0  1.9G   0% /dev/shm
tmpfs             1.9G   9.9M  1.9G   1% /run
tmpfs             1.9G      0  1.9G   0% /sys/fs/cgroup
/dev/sda2          15G   3.9G   11G  27% /
/dev/sda1         994M   165M  830M  17% /boot
tmpfs             376M    16K  376M   1% /run/user/42
tmpfs             376M   4.6M  372M   2% /run/user/0
/dev/sr0          6.7G   6.7G      0 100% /run/media/root/RHEL-8-0-0-
BaseOS-x86_64
[root@localhost ~]#


****************** END **************************************
```