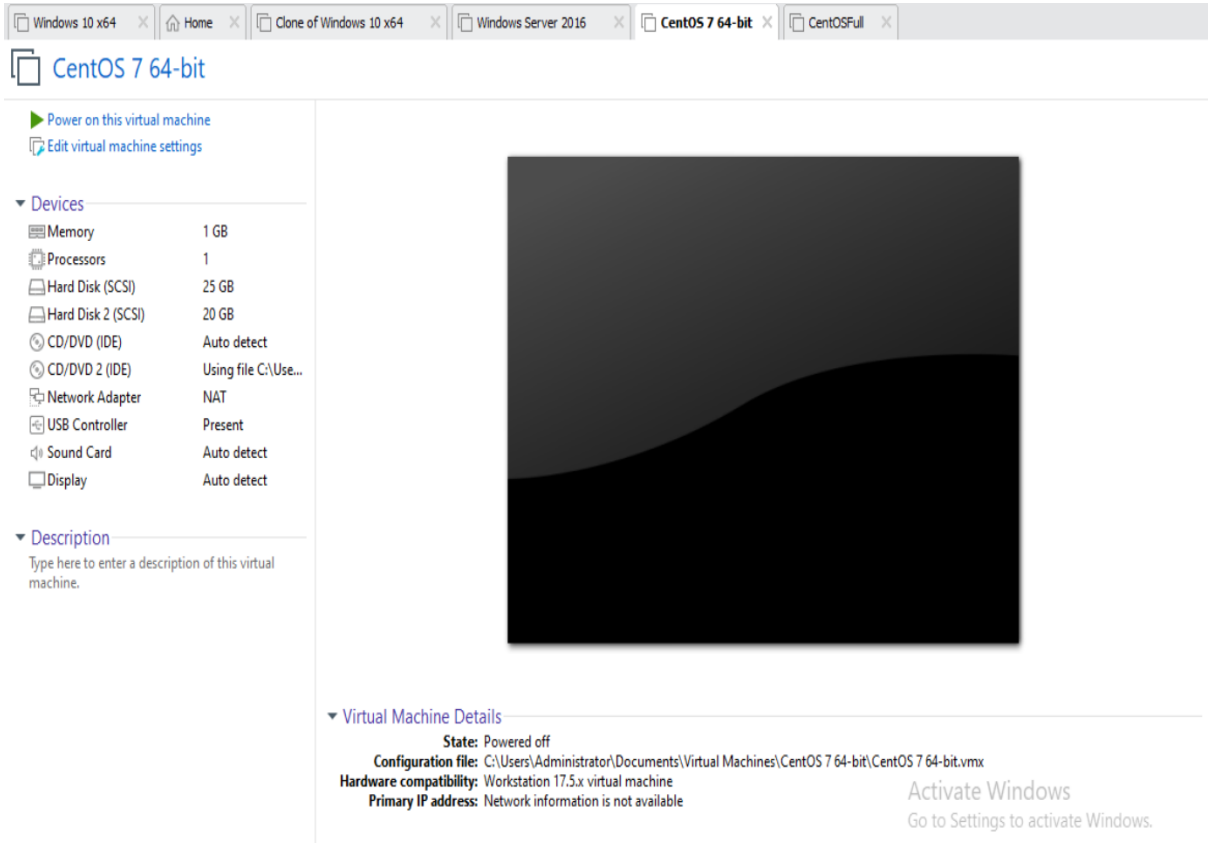
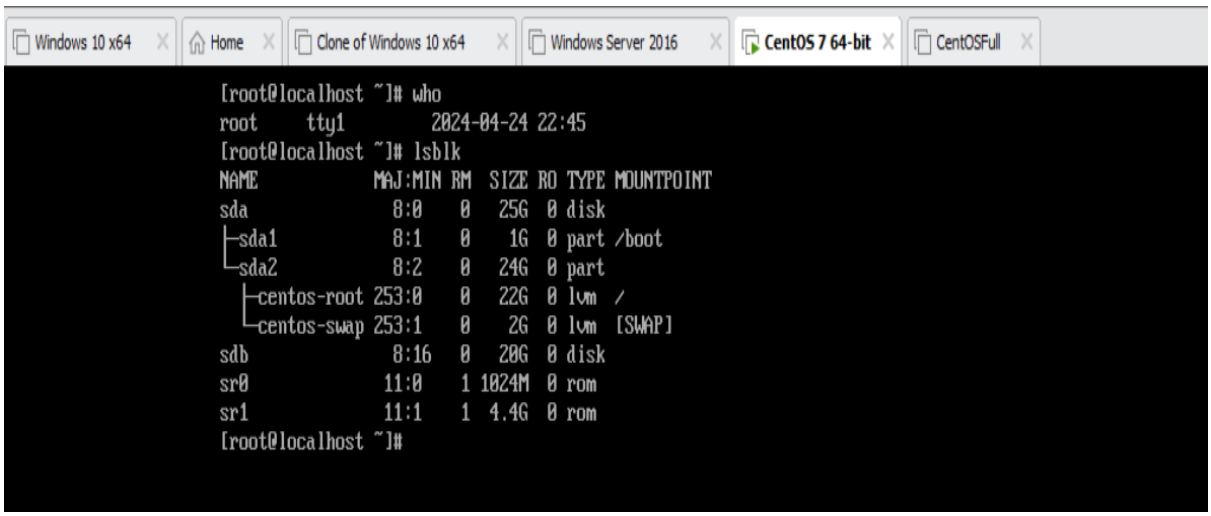
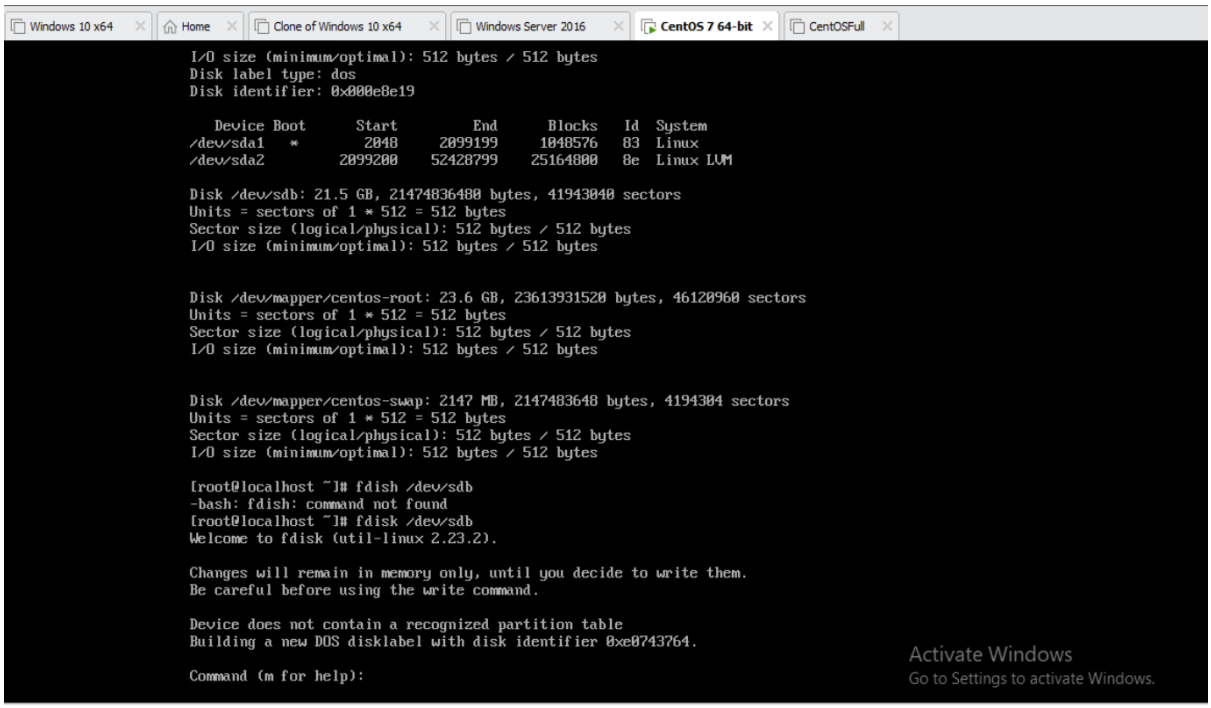
Linux Disk partition and adding disks and partitions & File system : -

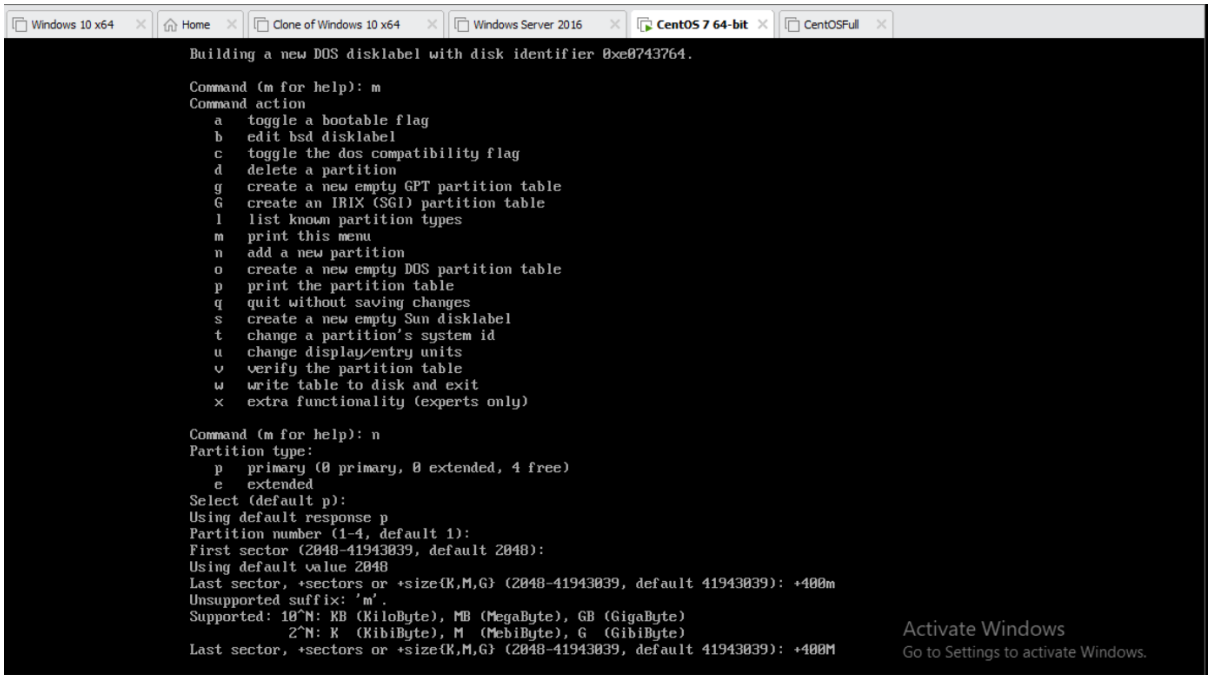
. Adding hard disk 2 of 25 gb ram

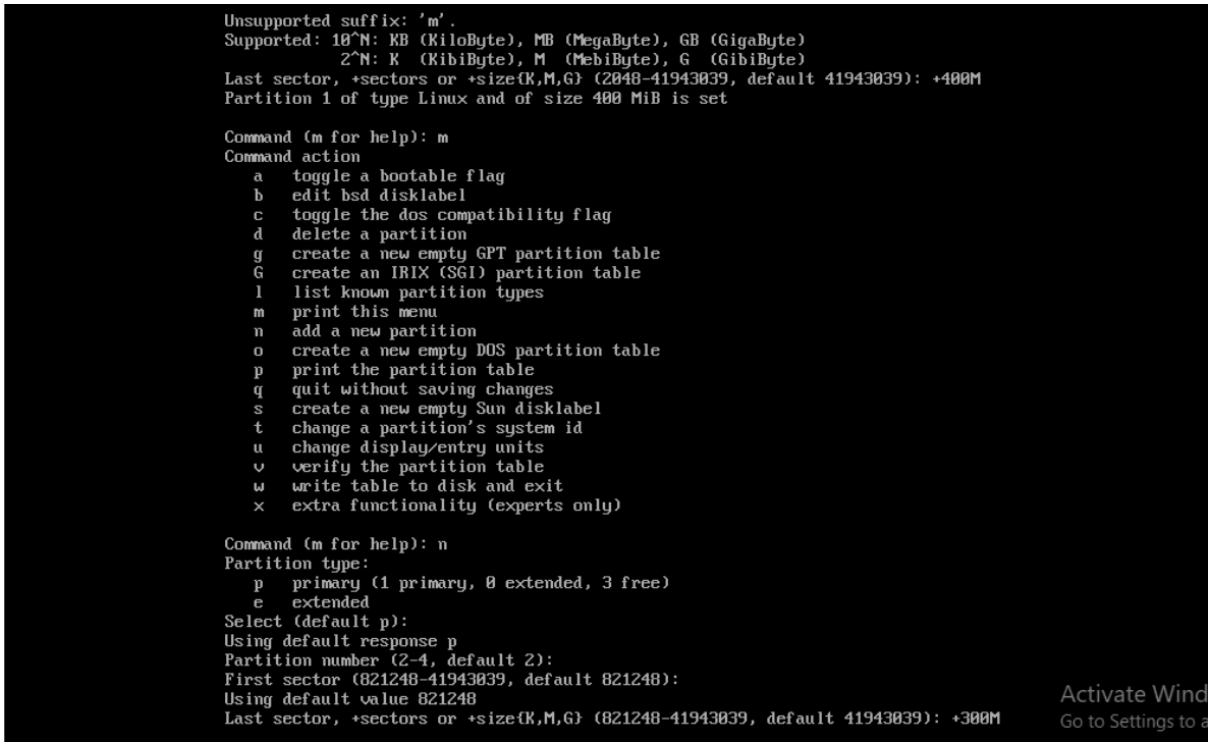


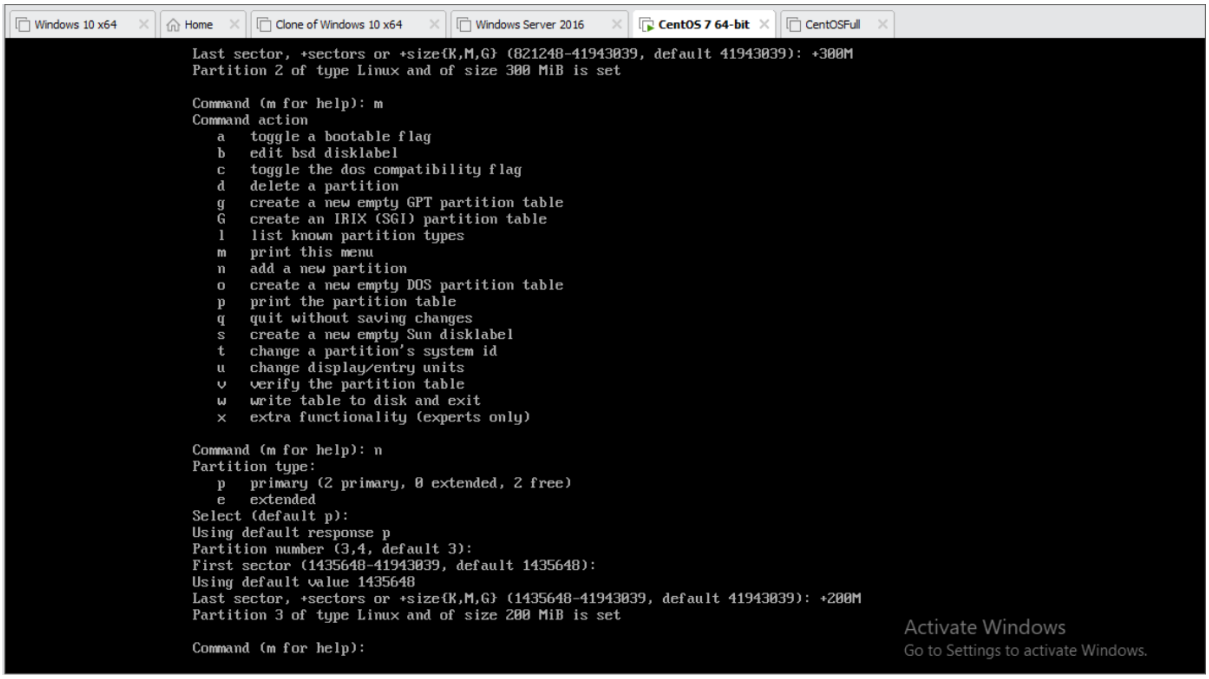


```
[root@localhost ~]# fdisk -l

Disk /dev/sda: 26.8 GB, 26843545600 bytes, 52428800 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
Disk label type: dos
Disk identifier: 0x000e8e19

   Device Boot      Start         End      Blocks   Id  System
/dev/sda1   *        2048     2099199     1048576   83  Linux
/dev/sda2         2099200    52428799    25164800   8e  Linux LVM

Disk /dev/sdb: 21.5 GB, 21474836480 bytes, 41943040 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


Disk /dev/mapper/centos-root: 23.6 GB, 23613931520 bytes, 46120960 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


Disk /dev/mapper/centos-swap: 2147 MB, 2147483648 bytes, 4194304 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
```



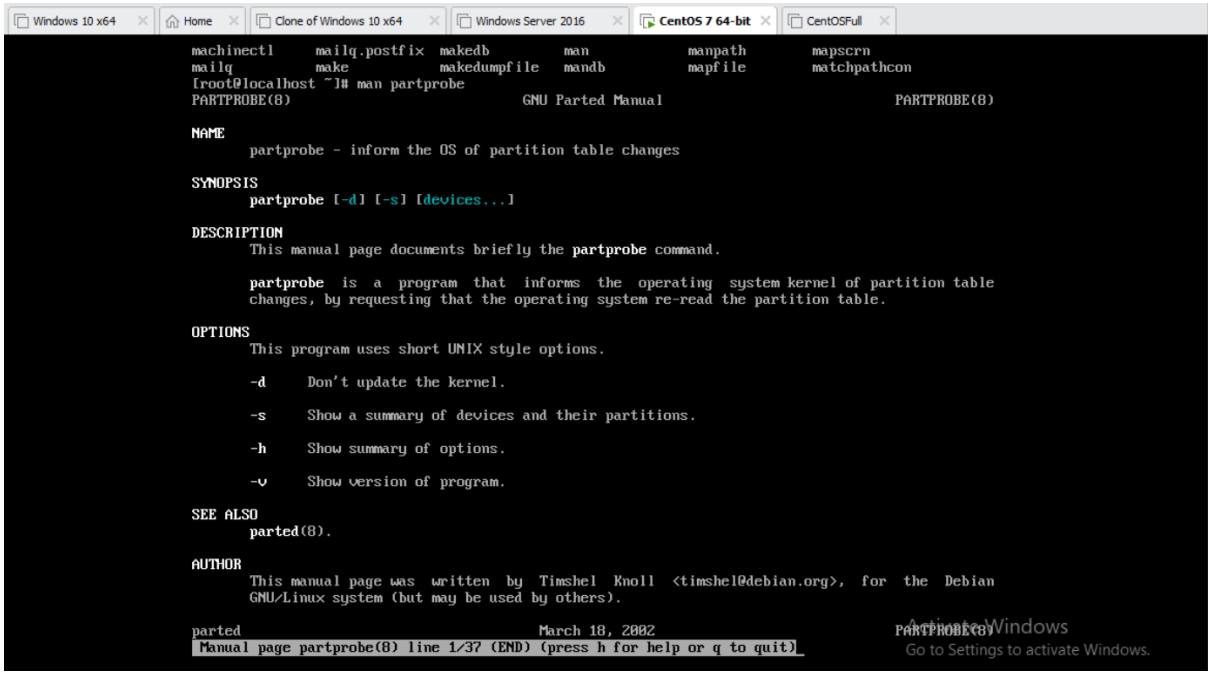

Windows 10 x64
Home
Clone of Windows 10 x64
Windows Server 2016
CentOS 7 64-bit
CentOSFull
Building a new DOS disklabel with disk identifier 0xe0743764.
Command (m for help): m
Command action
a toggle a bootable flag
b edit bsd disklabel
c toggle the dos compatibility flag
d delete a partition
g create a new empty GPT partition table
G create an IRIX (SGI) partition table
l list known partition types
m print this menu
n add a new partition
o create a new empty DOS partition table
p print the partition table
q quit without saving changes
s create a new empty Sun disklabel
t change a partition's system id
u change display/entry units
v verify the partition table
w write table to disk and exit
x extra functionality (experts only)
Command (m for help): n
Partition type:
p primary (0 primary, 0 extended, 4 free)
e extended
Select (default p):
Using default response p
Partition number (1-4, default 1):
First sector (2048-41943039, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-41943039, default 41943039): +400m
Unsupported suffix: 'm'.
Supported: 10^N: KB (KiloByte), MB (MegaByte), GB (GigaByte)
2^N: K (KibiByte), M (MebiByte), G (GibiByte)
Last sector, +sectors or +size{K,M,G} (2048-41943039, default 41943039): +400M
Activate Windows
Go to Settings to activate Windows.

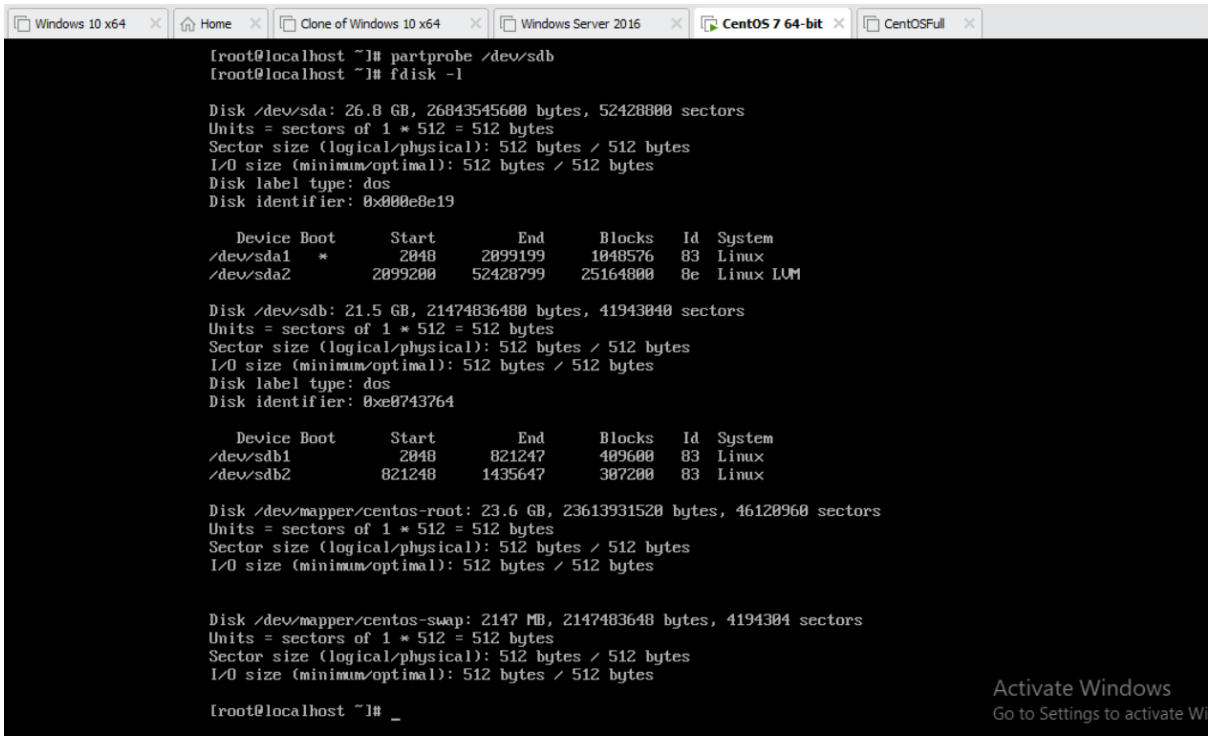

Unsupported suffix: 'm'.
Supported: 10^N: KB (KiloByte), MB (MegaByte), GB (GigaByte)
2^N: K (KibiByte), M (MebiByte), G (GibiByte)
Last sector, +sectors or +size{K,M,G} (2048-41943039, default 41943039): +400M
Partition 1 of type Linux and of size 400 MiB is set
Command (m for help): m
Command action
a toggle a bootable flag
b edit bsd disklabel
c toggle the dos compatibility flag
d delete a partition
g create a new empty GPT partition table
G create an IRIX (SGI) partition table
l list known partition types
m print this menu
n add a new partition
o create a new empty DOS partition table
p print the partition table
q quit without saving changes
s create a new empty Sun disklabel
t change a partition's system id
u change display/entry units
v verify the partition table
w write table to disk and exit
x extra functionality (experts only)
Command (m for help): n
Partition type:
p primary (1 primary, 0 extended, 3 free)
e extended
Select (default p):
Using default response p
Partition number (2-4, default 2):
First sector (821248-41943039, default 821248):
Using default value 821248
Last sector, +sectors or +size{K,M,G} (821248-41943039, default 41943039): +300M
Activate Wind
Go to Settings to a




```
Partition type:
   p   primary (2 primary, 0 extended, 2 free)
   e   extended
Select (default p):
Using default response p
Partition number (3,4, default 3):
First sector (1435648-41943039, default 1435648):
Using default value 1435648
Last sector, +sectors or +size{K,M,G} (1435648-41943039, default 41943039): +200M
Partition 3 of type Linux and of size 200 MiB is set

Command (m for help): m
Command action
   a   toggle a bootable flag
   b   edit bsd disklabel
   c   toggle the dos compatibility flag
   d   delete a partition
   g   create a new empty GPT partition table
   G   create an IRIX (SGI) partition table
   l   list known partition types
   m   print this menu
   n   add a new partition
   o   create a new empty DOS partition table
   p   print the partition table
   q   quit without saving changes
   s   create a new empty Sun disklabel
   t   change a partition's system id
   u   change display/entry units
   v   verify the partition table
   w   write table to disk and exit
   x   extra functionality (experts only)

Command (m for help): d
Partition number (1-3, default 3): 3
Partition 3 is deleted

Command (m for help):
```

```
Command (m for help): d
Partition number (1-3, default 3): 3
Partition 3 is deleted

Command (m for help): m
Command action
   a   toggle a bootable flag
   b   edit bsd disklabel
   c   toggle the dos compatibility flag
   d   delete a partition
   g   create a new empty GPT partition table
   G   create an IRIX (SGI) partition table
   l   list known partition types
   m   print this menu
   n   add a new partition
   o   create a new empty DOS partition table
   p   print the partition table
   q   quit without saving changes
   s   create a new empty Sun disklabel
   t   change a partition's system id
   u   change display/entry units
   v   verify the partition table
   w   write table to disk and exit
   x   extra functionality (experts only)

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.
Syncing disks.
```



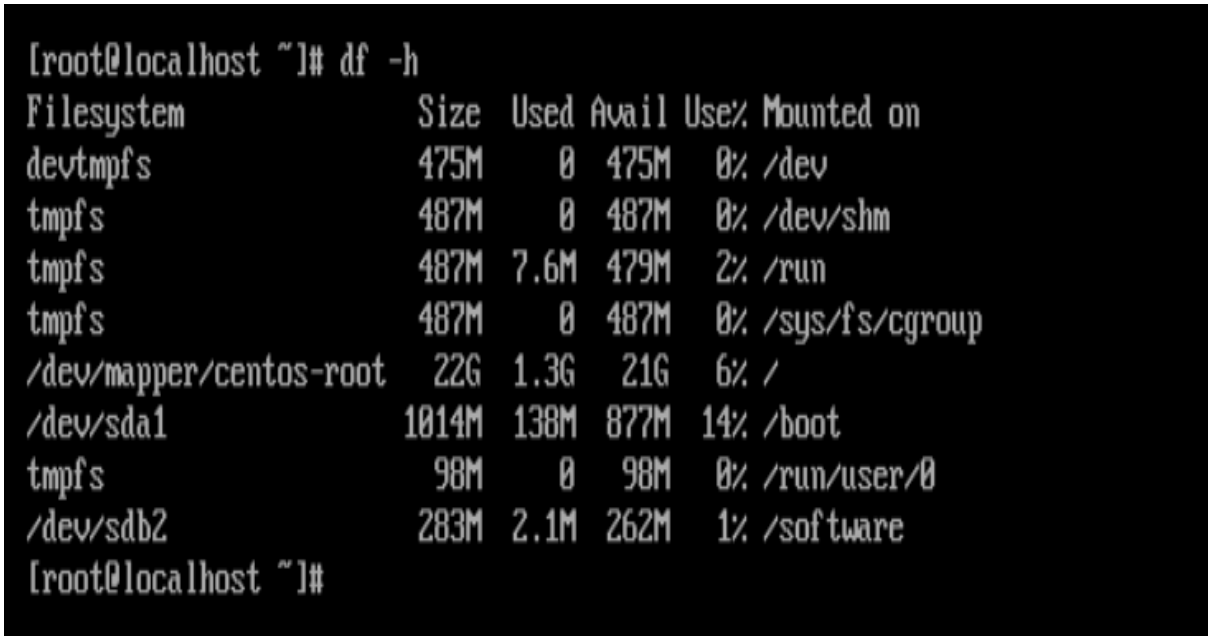

Windows 10 x64
Home
Clone of Windows 10 x64
Windows Server 2016
CentOS 7 64-bit
CentOSFull
[root@localhost ~]# partprobe /dev/sdb
[root@localhost ~]# fdisk -l
Disk /dev/sda: 26.8 GB, 26843545600 bytes, 52428800 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x000e8e19
Device Boot Start End Blocks Id System
/dev/sda1 * 2048 2099199 1048576 83 Linux
/dev/sda2 2099200 52428799 25164800 8e Linux LVM
Disk /dev/sdb: 21.5 GB, 21474836480 bytes, 41943040 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
Disk label type: dos
Disk identifier: 0xe0743764
Device Boot Start End Blocks Id System
/dev/sdb1 2048 821247 409600 83 Linux
/dev/sdb2 821248 1435647 307200 83 Linux
Disk /dev/mapper/centos-root: 23.6 GB, 23613931520 bytes, 46120960 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
Disk /dev/mapper/centos-swap: 2147 MB, 2147483648 bytes, 4194304 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
[root@localhost ~]# _
Activate Windows
Go to Settings to activate Wi

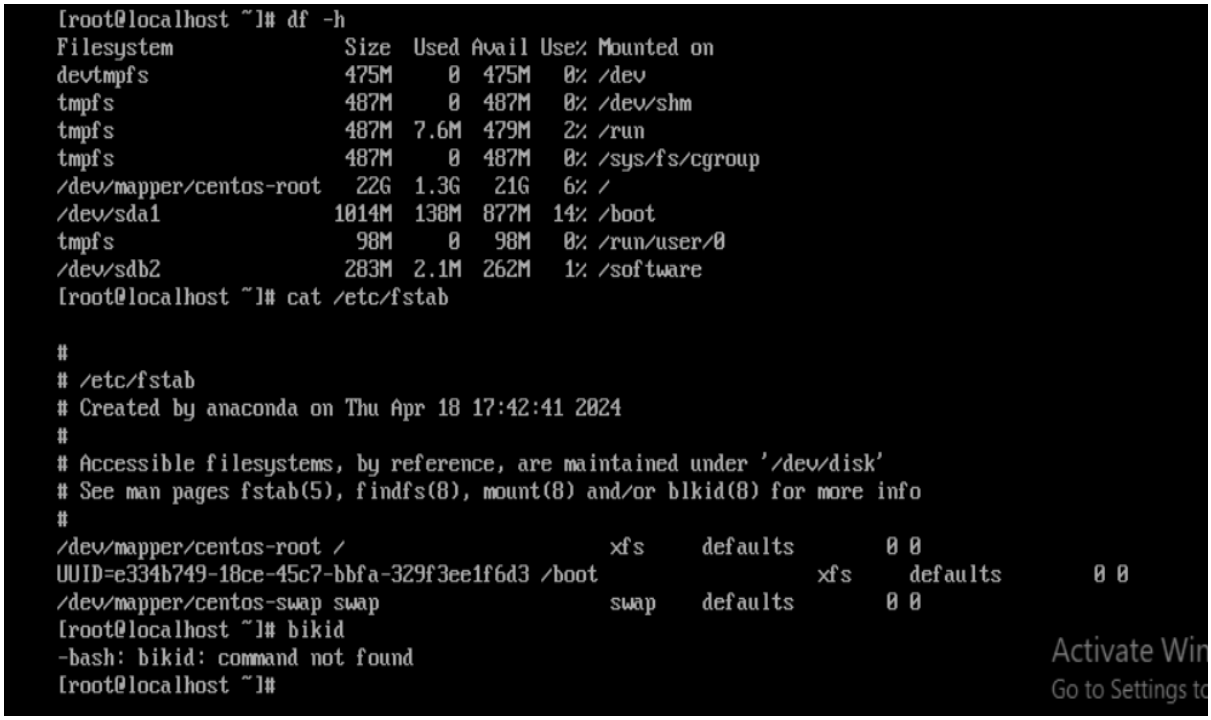

[root@localhost ~]# mkfs.xfs /dev/sdb/
/dev/sdb/: Not a directory
Usage: mkfs.xfs
/* blocksize */ [-b log=n|size=num]
/* metadata */ [-m crc=0|1,finobt=0|1,uuid=xxx]
/* data subvol */ [-d agcount=n,agsize=n,file,name=xxx,size=num,
(sunit=value,swidth=value|su=num,sw=num|noalign),
sectlog=n|sectsize=num
/* force overwrite */ [-f]
/* inode size */ [-i log=n|perblock=n|size=num,maxpct=n,attr=0|1|2,
projid32bit=0|1]
/* no discard */ [-K]
/* log subvol */ [-l agnum=n,internal,size=num,logdev=xxx,version=n
sunit=value|su=num,sectlog=n|sectsize=num,
lazy-count=0|1]
/* label */ [-L label (maximum 12 characters)]
/* naming */ [-n log=n|size=num,version=2|ci,ftype=0|1]
/* no-op info only */ [-N]
/* prototype file */ [-p fname]
/* quiet */ [-q]
/* realtime subvol */ [-r extsize=num,size=num,rtdev=xxx]
/* sectorsize */ [-s log=n|size=num]
/* version */ [-V]
devicename
<devicename> is required unless -d name=xxx is given.
<num> is xxx (bytes), xxxs (sectors), xxxb (fs blocks), xxxk (xxx KiB),
xxxm (xxx MiB), xxxg (xxx GiB), xxxt (xxx TiB) or xxxp (xxx PiB).
<value> is xxx (512 byte blocks).
[root@localhost ~]# _

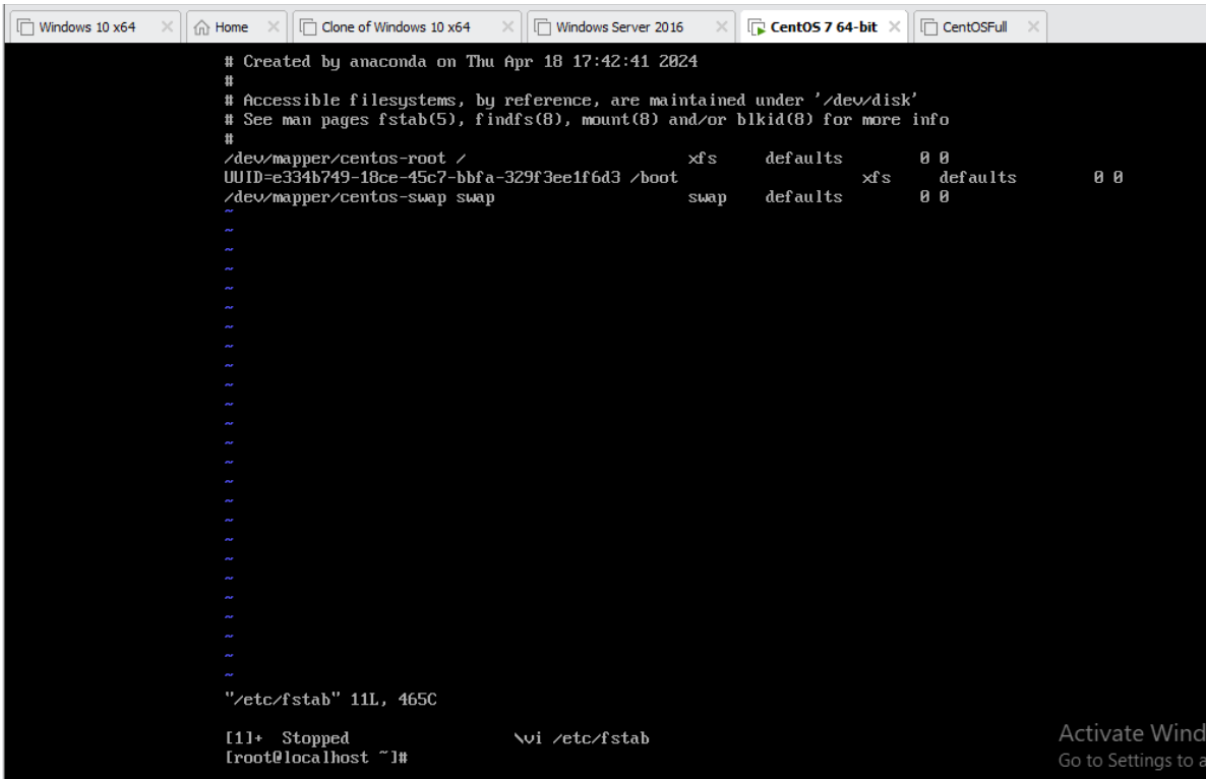
```
/* no-op info only */   [-N]
/* prototype file */    [-p fname]
/* quiet */             [-q]
/* realtime subvol */   [-r extsize=num,size=num,rtdev=xxx]
/* sectorsize */        [-s log=n|size=num]
/* version */           [-V]
                        devicename
<devicename> is required unless -d name=xxx is given.
<num> is xxx (bytes), xxxs (sectors), xxxb (fs blocks), xxxk (xxx KiB),
      xxxm (xxx MiB), xxxg (xxx GiB), xxxt (xxx TiB) or xxxp (xxx PiB).
<value> is xxx (512 byte blocks).
[root@localhost ~]# mkfs.ext4 /dev/sdb/
mke2fs 1.42.9 (28-Dec-2013)
Could not stat /dev/sdb/ --- Not a directory
[root@localhost ~]# mkfs.ext4 /dev/sdb2
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=1024 (log=0)
Fragment size=1024 (log=0)
Stride=0 blocks, Stripe width=0 blocks
76912 inodes, 307200 blocks
15360 blocks (5.00%) reserved for the super user
First data block=1
Maximum filesystem blocks=33947648
38 block groups
8192 blocks per group, 8192 fragments per group
2024 inodes per group
Superblock backups stored on blocks:
        8193, 24577, 40961, 57345, 73729, 204801, 221185

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

[root@localhost ~]# _
```

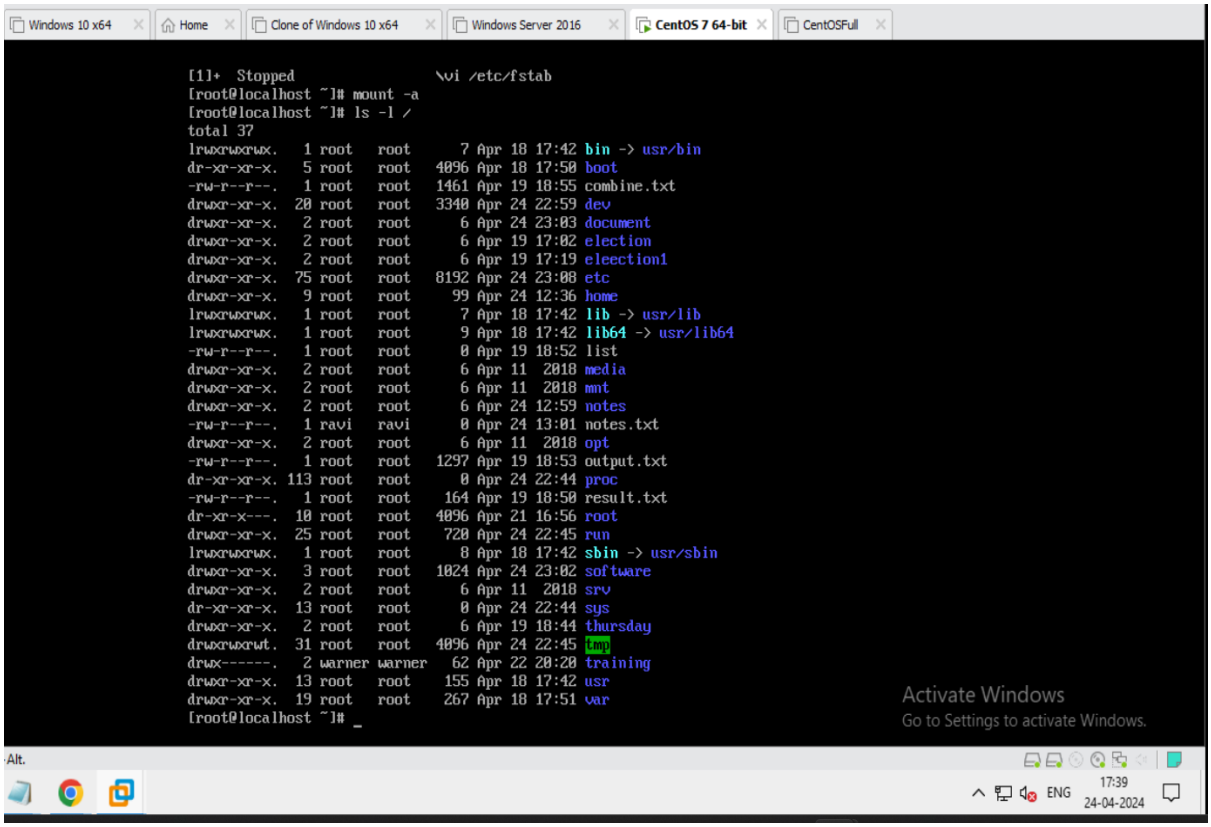


```
OS type: Linux
Block size=1024 (log=0)
Fragment size=1024 (log=0)
Stride=0 blocks, Stripe width=0 blocks
76912 inodes, 307200 blocks
15360 blocks (5.00%) reserved for the super user
First data block=1
Maximum filesystem blocks=33947648
38 block groups
8192 blocks per group, 8192 fragments per group
2024 inodes per group
Superblock backups stored on blocks:
        8193, 24577, 40961, 57345, 73729, 204801, 221185

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

[root@localhost ~]# mkdir /document /software
[root@localhost ~]# mount /dev/sdb/ /document
mount: /dev/sdb is write-protected, mounting read-only
mount: wrong fs type, bad option, bad superblock on /dev/sdb,
       missing codepage or helper program, or other error

       In some cases useful info is found in syslog - try
       dmesg | tail or so.
[root@localhost ~]# mount /dev/sdb1 /document
mount: /dev/sdb1 is write-protected, mounting read-only
mount: wrong fs type, bad option, bad superblock on /dev/sdb1,
       missing codepage or helper program, or other error

       In some cases useful info is found in syslog - try
       dmesg | tail or so.
[root@localhost ~]# mount /dev/sdb2 /software
[root@localhost ~]# [ 1281.497404] sdb2: WRITE SAME failed. Manually zeroing.
_
```


[root@localhost ~]# df -h
Filesystem Size Used Avail Use% Mounted on
devtmpfs 475M 0 475M 0% /dev
tmpfs 487M 0 487M 0% /dev/shm
tmpfs 487M 7.6M 479M 2% /run
tmpfs 487M 0 487M 0% /sys/fs/cgroup
/dev/mapper/centos-root 22G 1.3G 21G 6% /
/dev/sda1 1014M 138M 877M 14% /boot
tmpfs 98M 0 98M 0% /run/user/0
/dev/sdb2 283M 2.1M 262M 1% /software
[root@localhost ~]#


[root@localhost ~]# df -h
Filesystem Size Used Avail Use% Mounted on
devtmpfs 475M 0 475M 0% /dev
tmpfs 487M 0 487M 0% /dev/shm
tmpfs 487M 7.6M 479M 2% /run
tmpfs 487M 0 487M 0% /sys/fs/cgroup
/dev/mapper/centos-root 22G 1.3G 21G 6% /
/dev/sda1 1014M 138M 877M 14% /boot
tmpfs 98M 0 98M 0% /run/user/0
/dev/sdb2 283M 2.1M 262M 1% /software
[root@localhost ~]# cat /etc/fstab
#
/etc/fstab
Created by anaconda on Thu Apr 18 17:42:41 2024
#
Accessible filesystems, by reference, are maintained under '/dev/disk'
See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
/dev/mapper/centos-root / xfs defaults 0 0
UUID=e334b749-18ce-45c7-bbfa-329f3ee1f6d3 /boot xfs defaults 0 0
/dev/mapper/centos-swap swap swap defaults 0 0
[root@localhost ~]# bikid
-bash: bikid: command not found
[root@localhost ~]#
Activate Win
Go to Settings to


Windows 10 x64
Home
Clone of Windows 10 x64
Windows Server 2016
CentOS 7 64-bit
CentOSFull
Created by anaconda on Thu Apr 18 17:42:41 2024
#
Accessible filesystems, by reference, are maintained under '/dev/disk'
See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info
#
/dev/mapper/centos-root /   xfs   defaults   0 0
UUID=e334b749-18ce-45c7-bbfa-329f3ee1f6d3 /boot   xfs   defaults   0 0
/dev/mapper/centos-swap swap   swap   defaults   0 0
"/etc/fstab" 11L, 465C
[1]+ Stopped   \vi /etc/fstab
[root@localhost ~]#
Activate Wind
Go to Settings to a


Windows 10 x64
Home
Clone of Windows 10 x64
Windows Server 2016
CentOS 7 64-bit
CentOSFull
[1]+ Stopped   \vi /etc/fstab
[root@localhost ~]# mount -a
[root@localhost ~]# ls -l /
total 37
lrwxrwxrwx.   1 root   root   7 Apr 18 17:42 bin -> usr/bin
dr-xr-xr-x.   5 root   root   4096 Apr 18 17:50 boot
-rw-r--r--.   1 root   root   1461 Apr 19 18:55 combine.txt
drwxr-xr-x. 20 root   root   3340 Apr 24 22:59 dev
drwxr-xr-x.   2 root   root   6 Apr 24 23:03 document
drwxr-xr-x.   2 root   root   6 Apr 19 17:02 election
drwxr-xr-x.   2 root   root   6 Apr 19 17:19 eleection1
drwxr-xr-x. 75 root   root   8192 Apr 24 23:08 etc
drwxr-xr-x.   9 root   root   99 Apr 24 12:36 home
lrwxrwxrwx.   1 root   root   7 Apr 18 17:42 lib -> usr/lib
lrwxrwxrwx.   1 root   root   9 Apr 18 17:42 lib64 -> usr/lib64
-rw-r--r--.   1 root   root   0 Apr 19 18:52 list
drwxr-xr-x.   2 root   root   6 Apr 11 2018 media
drwxr-xr-x.   2 root   root   6 Apr 11 2018 mnt
drwxr-xr-x.   2 root   root   6 Apr 24 12:59 notes
-rw-r--r--.   1 ravi   ravi   0 Apr 24 13:01 notes.txt
drwxr-xr-x.   2 root   root   6 Apr 11 2018 opt
-rw-r--r--.   1 root   root   1297 Apr 19 18:53 output.txt
dr-xr-xr-x. 113 root   root   0 Apr 24 22:44 proc
-rw-r--r--.   1 root   root   164 Apr 19 18:50 result.txt
dr-xr-x---. 10 root   root   4096 Apr 21 16:56 root
drwxr-xr-x. 25 root   root   720 Apr 24 22:45 run
lrwxrwxrwx.   1 root   root   8 Apr 18 17:42 sbin -> usr/sbin
drwxr-xr-x.   3 root   root   1024 Apr 24 23:02 software
drwxr-xr-x.   2 root   root   6 Apr 11 2018 srv
dr-xr-xr-x. 13 root   root   0 Apr 24 22:44 sys
drwxr-xr-x.   2 root   root   6 Apr 19 18:44 thursday
drwxrwxrwt. 31 root   root   4096 Apr 24 22:45 tmp
drwx------.   2 warner warner   62 Apr 22 20:20 training
drwxr-xr-x. 13 root   root   155 Apr 18 17:42 usr
drwxr-xr-x. 19 root   root   267 Apr 18 17:51 var
[root@localhost ~]# _
Activate Windows
Go to Settings to activate Windows.
Alt.
ENG
17:39
24-04-2024

```
drwxr-xr-x.  15 root   root    287 Apr 18 17:51 var
[root@localhost ~]# getfacl /document
getfacl: Removing leading '/' from absolute path names
# file: document
# owner: root
# group: root
user::rwx
group::r-x
other::r-x

[root@localhost ~]# ls /
bin         document    home   media      opt         root      srv       training
boot        election    lib    mnt        output.txt  run       sys       usr
combine.txt eleection1  lib64  notes      proc        sbin      thursday  var
dev         etc         list   notes.txt  result.txt  software  tmp
[root@localhost ~]#
```

```
dev         etc         list   notes.txt  result.txt  software  tmp
[root@localhost ~]# parted
GNU Parted 3.1
Using /dev/sda
Welcome to GNU Parted! Type 'help' to view a list of commands.
(parted) print version
Model: VMware, VMware Virtual S (scsi)
Disk /dev/sda: 26.8GB
Sector size (logical/physical): 512B/512B
Partition Table: msdos
Disk Flags:

Number  Start   End     Size    Type     File system  Flags
 1      1049kB  1075MB  1074MB  primary  xfs          boot
 2      1075MB  26.8GB  25.8GB  primary               lvm


GNU Parted 3.1

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(parted) _
```