

Laboratorul nr. 3

Informatii despre fisiere	1
Comanda stat	1
Comanda file	2
Obtinerea datelor de lucru:	2
Arhive (tar, gzip)	2
Comanda file	3
comenzi speciale pentru mai multe informatii despre fisiere	4
Partitionare, formatare, mountare	4
Obtinerea unui nou disc in VirtualBox	4
Partitionarea unui disc	7
Formatarea unei partiții	7
Montarea unei partitii	7
Montarea unui fisier iso (nepermanent)	7
Montarea unui director in alt director (nepermanent)	8
Cautarea fisierelor	8
Comanda locate	8
Comanda find	8

Informatii despre fisiere

Comanda stat

Stat afiseaza informatii detaliate despre fisiere si directoare. Utila in special in obtinerea timestamp-urilor.

stat /etc/passwd

```
File: /etc/passwd
Size: 2193          Blocks: 8          IO Block: 4096   regular file
Device: 801h/2049d Inode: 918340   Links: 1
Access: (0644/-rw-r--r--)  Uid: (  0/   root)   Gid: (  0/   root)
Access: 2021-11-02 14:44:36.922999918 -0400
Modify: 2021-11-02 14:44:36.922999918 -0400
Change: 2021-11-02 14:44:36.923999918 -0400
Birth: -
```

Size: dimensiunea in k

Blocks: numarul de blocuri ocupate de fisier (fals, se calculeaza ca nr. de blocuri de 512k)

IO Block: dimensiunea unui singur bloc (real) in k

regular file = tipul de fisier

Device: numarul dispozitivului hex/decimal

stat /

```
File: /
Size: 4096          Blocks: 8          IO Block: 4096   directory
Device: 801h/2049d Inode: 2           Links: 19
Access: (0755/drwxr-xr-x)  Uid: (   0/   root)   Gid: (   0/   root)
Access: 2021-11-02 14:31:07.000000000 -0400
Modify: 2021-11-02 14:47:08.002999659 -0400
Change: 2021-11-02 14:47:08.002999659 -0400
Birth: -
```

stat -f /

```
File: "/"
      ID: 4b943ea83c899516 Namelen: 255      Type: ext2/ext3
Block size: 4096      Fundamental block size: 4096
Blocks: Total: 4861604      Free: 892144      Available: 639421
Inodes: Total: 1245184      Free: 412877
```

Comanda file

Obtinerea datelor de lucru:

```
cd ~
```

```
wget http://makore.ro/lfp.tar.gz
```

```
tar -zxvf lfp.tar.gz
```

```
cd Linux_file_pack
```

```
ls
```

Arhive (tar, gzip)

```
cd ~
```

```
mkdir testarchive
```

```
cp lfp.tar.gz testarchive
```

```
cd testarchive
```

```
gunzip lfp.tar.gz
```

```
ls
```

```
tar -t -f lfp.tar lista arhivei
```

```
ls -all
```

```
cd /testarhive/Linux_file_pack/Video
ls
gzip *
ls
gunzip *
ls
```

Comanda file

```
cd Audio
```

```
file file_example_MP3_700KB.mp3
file file_example_WAV_1MG.wav
```

```
cd ../Video
```

```
file *
```

```
cd ../Block
```

```
file sample.iso
```

```
cd ../Office
```

```
file samplepptx.pptx
```

```
cp samplepptx.pptx samplepptx.avi
```

```
cd ../PDF
```

```
file *
```

editand fisierul si modificand un octet de la inceputul sau se schimba tipul de exemplu, fisierul samplepptx.avi

```
hexedit samplepptx.avi
```

primii octeti: 50 4B 03 04

inlocuim astfel: 50 4B 00 00 (Save: Ctrl-S, exit: Ctrl-C)

```
file samplepptx.avi
```

```
samplepptx.avi: Zip archive data, made by v4.5, extract using at least
v2.0, last modified Mon Jan 26 00:44:48 1970, uncompressed size 3397,
method=deflate
```

fisierele pptx pot fi dezarhivate:

```
unzip samplepptx.avi
```

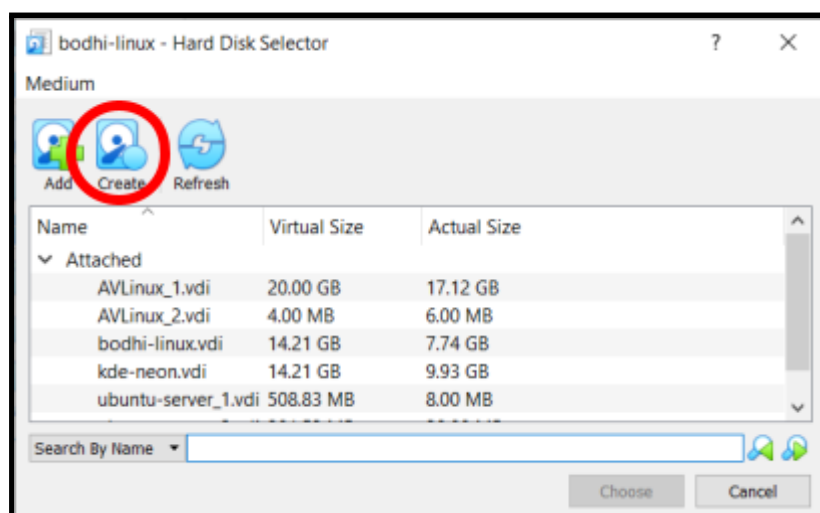
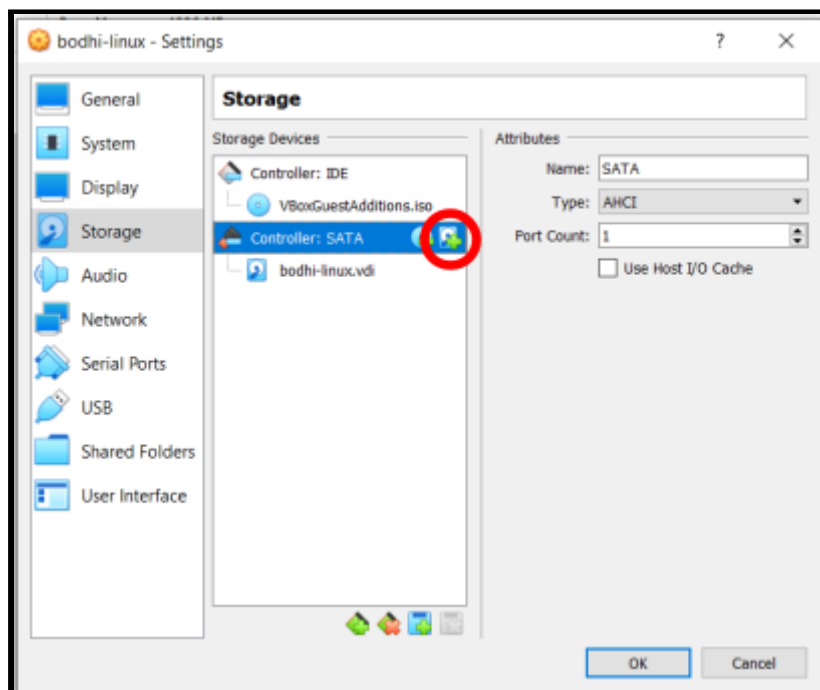
comenzi speciale pentru mai multe informatii despre fisiere

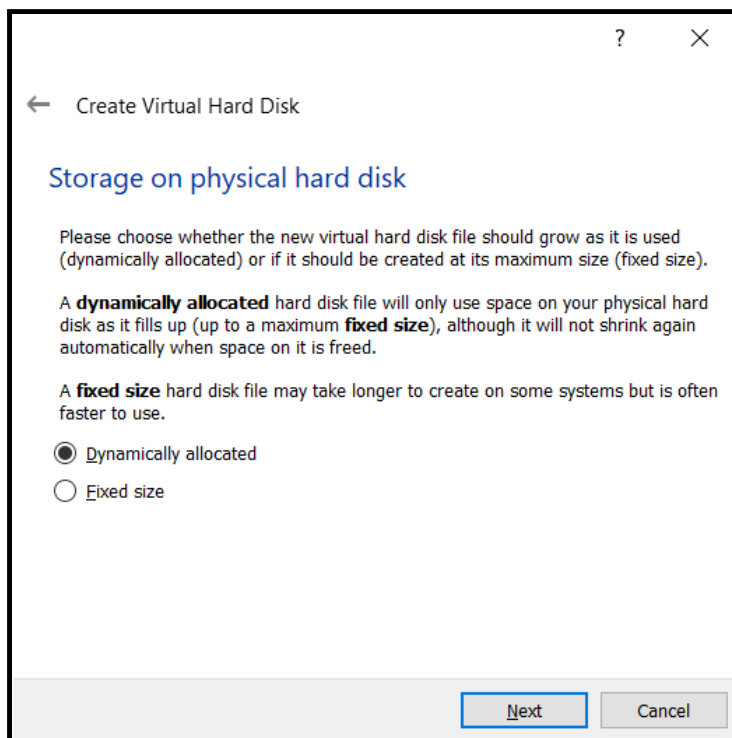
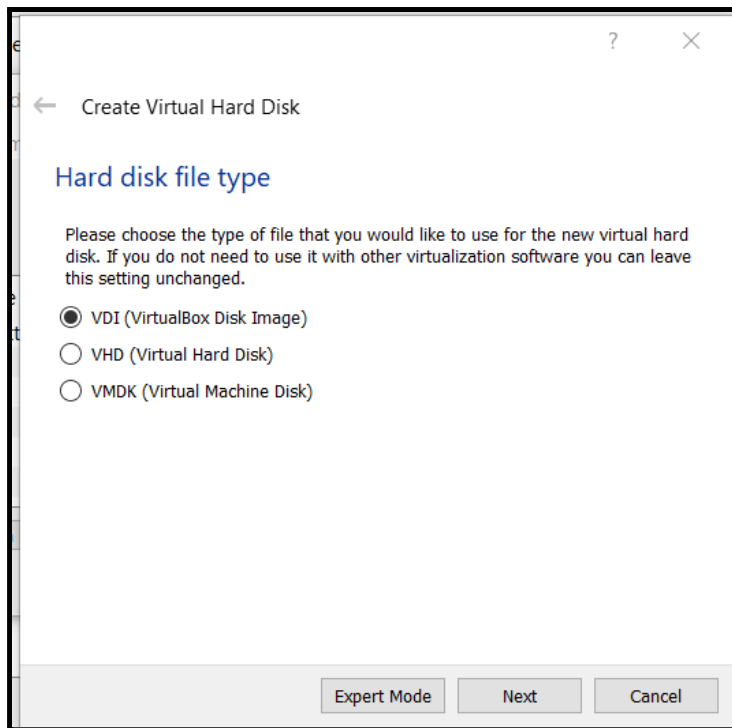
```
sudo apt install exiv2  
sudo apt install ffmpeg (ffprobe)  
sudo apt install pdftinfo
```

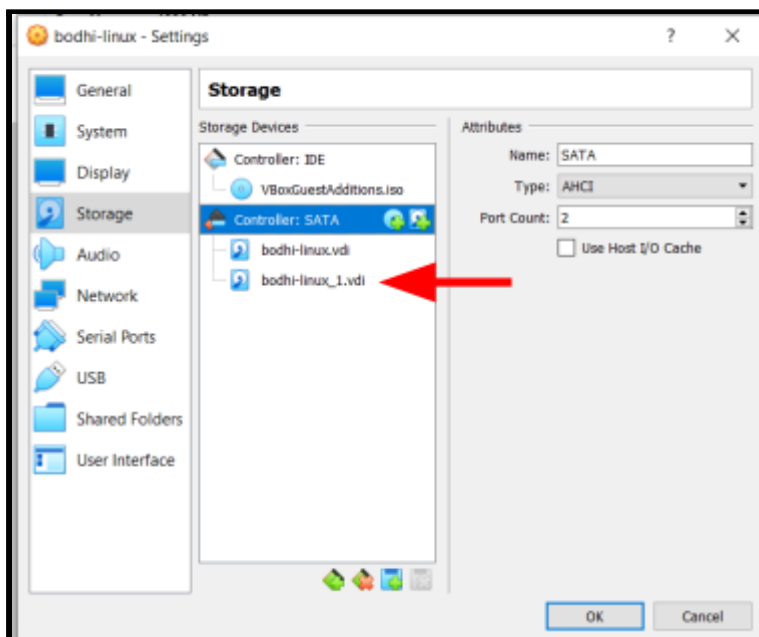
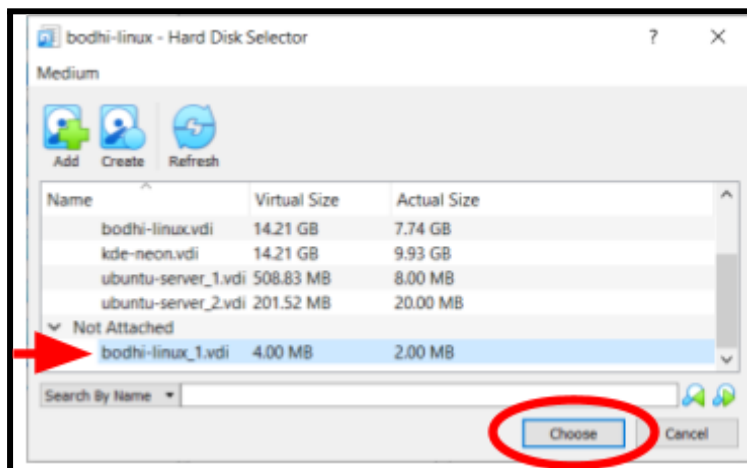
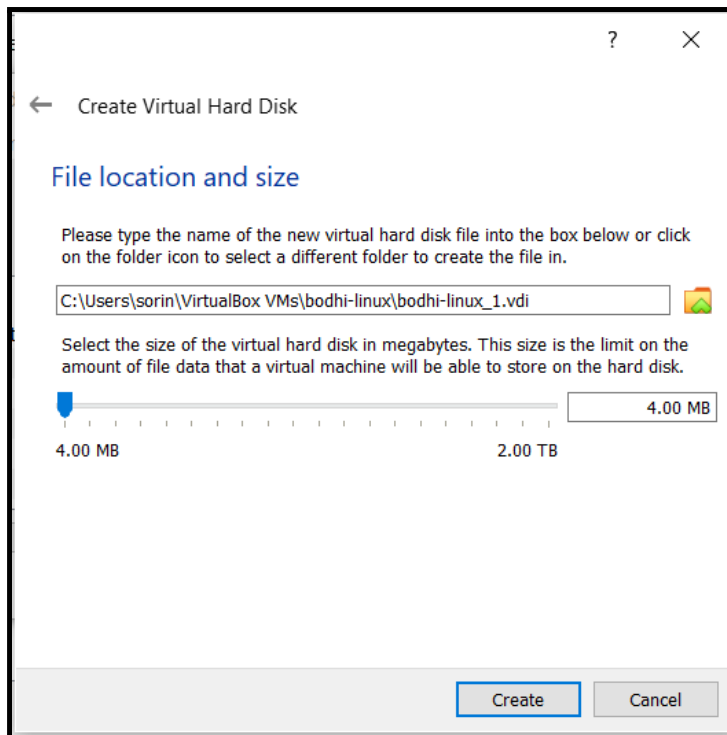
Partitionare, formatare, mountare

Obtinerea unui nou disc in VirtualBox

Cu masina virtuala inchisa, se ataseaza un nou disc:







Apoi, dupa pornirea Linux:

lsblk

```
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
sda   8:0    0 20G  0 disk
├─sda1 8:1    0 19G  0 part /
└─sda2 8:2    0   1G  0 part [SWAP]
sdb   8:16   0 50M  0 disk
sr0   11:0    1 1024M  0 rom
```

sdb este un dispozitiv de tip block care nu contine nici o partitie

Partitionarea unui disc

fdisk /dev/sdb (atentie: nu rulati pe partitii existente!!)

fdisk este o comanda interactiva, dupa deschiderea rulati comenzile:

n - pentru crearea unei noi partitii
p - pentru a specifica tipul noii partitii ca fiind primara (sau enter, default)
1 (sau alt numar daca partitia nu este prima) - pentru a specifica numărul partiției
enter pentru a accepta marginea inferioara a partiției
introduceti +20M pentru a crea o partitie de 20M sau enter pentru a accepta defaultul (care va fi finalul discului)

comanda p (a nu se confunda cu tipul partiției) afiseaza partițiile create

comanda w scrie noua schema de partitionare pe disc.

Formatarea unei partiții

mkfs.ext4 (sau alt sistem de fișiere) /dev/sdb1 (atentie: nu rulati pe partitii existente!!)

Montarea unei partitii

sudo mkdir /mnt/sdb1

mount /dev/sdb1 /mnt/sdb1

ls /mnt/sdb1

Montarea unui fisier iso (nepermanent)

cd ~/Linux_file_pack/Block

```
ls sample.iso
```

```
sudo mkdir /mnt/sample
```

```
sudo mount sample.iso /mnt/sample -o loop
```

```
ls /mnt/sample
```

Montarea unui director in alt director (nepermanent)

```
sudo mkdir /mnt/targetdir
```

```
ls /mnt/targetdir
```

```
sudo mount --bind ~/Linux_file_pack/Videos /mnt/targetdir
```

```
ls /mnt/targetdir
```

Cautarea fisierelor

Comanda locate

```
locate goodmoring
```

```
locate -A sample Block
```

cauta caile care contin atat sample cat si Block

```
locate -n 5 sample
```

afiseaza prinele 5

```
locate -c jpg
```

afiseaza doar numarul fisierelor gasite

```
locate -c -A sample Block
```

```
locate locate *ex*ls*.jpg
```

cautare cu wildcard

```
locate -i Block
```

cautare independenta de capitalizare

```
locate -S - statistici despre baza de date
```

Comanda find

```
cd
```

```
find . -name "*.jpg"
```

cauta in directorul curent si subdirectoare orice numit *.jpg

```
find . -name "*pexel*"
```

cauta in directorul curent si subdirectoare orice double

```
find . -name "*" -type d
```

cauta doar directoare

```
find . -name "Video*" -type f
```

cauta doar fisiere

```
find . -iname "Video*" -type d
```

Mai multe pattern-uri aplicate impreuna.

```
find . -type f \( -name "*.c" -o -name "*.sh" \)
```

```
find . -type f -not -name "*.c"
```

afiseaza tot ce NU se potriveste patternului

```
find . -type f -size +4096c
```


`b' for 512-byte blocks (this is the default if no suffix is used)
`c' for bytes
`w' for two-byte words
`k' for Kilobytes (units of 1024 bytes)
`M' for Megabytes (units of 1048576 bytes)
`G' for Gigabytes (units of 1073741824 bytes)

cd ~

find . -type f -size +4096k

find /etc -executable gaseste toate fisierele care pot fi executate (inclusiv directoarele)

find /etc -executable -exec stat --printf "%n%A\n" {} \;