

Formatted HDD disk recovery

HDD could be intentionally, unintentionally or hardware-based broken. This includes accidental “quick” format of disk. Most of data could be patiently recovered, only if disk will not be used until full data recovery [1-3].

- 1) shutdown Personal Computer and do not turn it on,
- 2) externally create linux liveCD, unplug all hard drives,
- 3) get another harddrive for image creation (approximately double the size), multiple harddrives could be used for data recovery. For broken disk image creation the another harddrive must have at least the same size.
- 4) plug in broken harddrive, and image+recovery harddrive, boot PC from liveCD,
- 5) in this point carefull actions are a must. It is easy for pernament data loss!
- 6) create broken disk image with dd. Double check that source is the broken disk and destination is a image+recovery disk.
- 7) shutdown PC, unplug broken disk, reboot to liveCD with image+recovery harddrive,
- 8) analyse image and recover files with testdisk:

```
#sudo apt install testdisk
```

```
#sudo testdisk broken_disk_image.dd
```

```
Log File->Partition->Analyse->Deeper Search
```

```
Advanced->Partition->Copy Files to recovery harddisk
```

- 9) if parition analysis fails it is still possible to recover raw, binary data directly from image (there will be no filenames)[4]:

```
#sudo apt install photorec
```

```
#sudo photorec broken_disk_image.dd
```

```
sort recovered files:
```

```
#mkdir -p $HOME/Documents/ RecoveredFiles
```

```
#find . -type f \( -iname “*.pdf” -o -iname “*.doc” \) -exec cp ‘{’ $HOME/Documents/RecoveredFiles/ \;
```

[1]<https://askubuntu.com/questions/865834/formatted-drive-recovery>

[2]<https://www.tecmint.com/install-testdisk-data-recovery-tool-in-linux/>

[3]<https://www.tecmint.com/recover-deleted-files-using-testdisk-in-linux/>

[4]https://www.youtube.com/watch?v=d1_rMHuUBOc