

# Dischi e Filesystem



**POUL**

*have a lot of fun...*

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Consulente Informatico

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# Tipi di File

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- File Ordinari (Regular)
  - Testuali
  - Binari

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  - Soft Link
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  - Hard Link
- File Speciali
  - Device
  - Socket



# File Hierarchy Standard

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## / - root

- /bin - /sbin
- /boot
- /dev
- /etc
- /home
- /lib - lib32 lib64
- /media - /mnt
- /opt
- /proc
- /root
- /run
- /var
- /sys
- /usr
  - share
  - bin, sbin
  - include
  - lib
  - local
  - src



## Agganciare\*/Montare HDD

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```
mount [<opzioni> -t <tipo>] <cosa>  
      <dove>
```

# Dischi

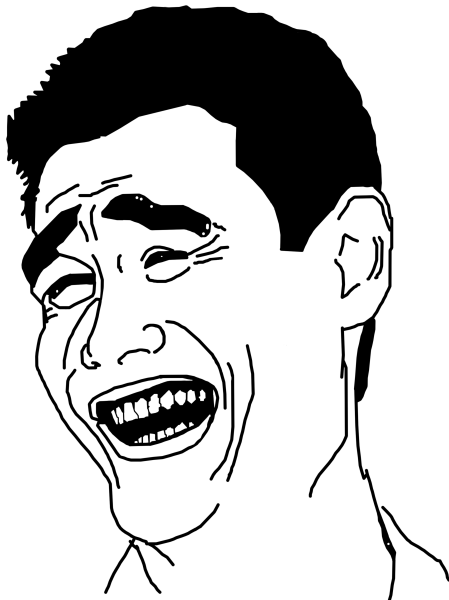
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- HDD
- SSD
- iSCSI



We Don't Care

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# Partizionamento

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- GPT
- MSDOS - BIOS
- Anarchia ...

# Come Partizionare

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- Über Pro
  - editor HEX
  - fdisk
  - parted

# Come Partizionare

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## ■ Über Pro

- editor HEX
- fdisk
- parted

## ■ Persone con una vita

- cfdisk
- gparted\*
- altri tool

## Clonare partizioni o interi HDD/SSD

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```
dd if=<sorgente> of=<destinazione> bs=<dimensione>  
    count=<quante volte>
```

# What is a filesystem?

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# Formattare

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```
mkfs.<nome filesystem> <opzioni> <device>
```

# Filesystem

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- ext4 - nuovo e consigliato
- ext3 - journaled
- ext2 - ye olde filesystemm
- reiserfs - ottimo per file piccoli
- reiser4 - interessante, ma non sviluppato
- xfs - molto performante per trasferimenti
- molti altri
- zfs\* - later
- btrfs\* - later



# Filesystem Speciali

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- tmpfs - RAM
- procfs - virtuale → Processi
- sysfs - virtuale → Impostazioni Kernel

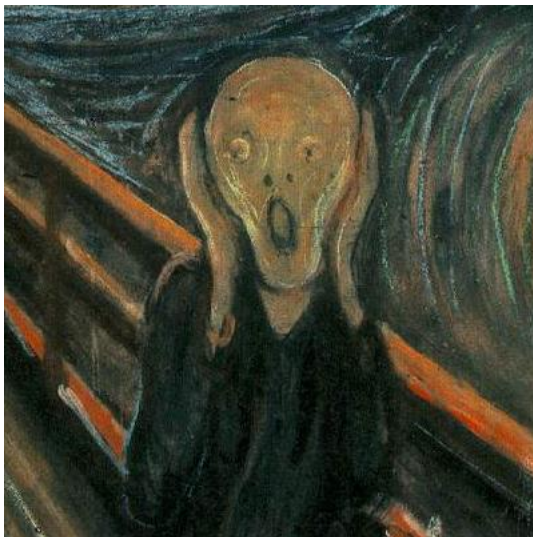
# Problemi

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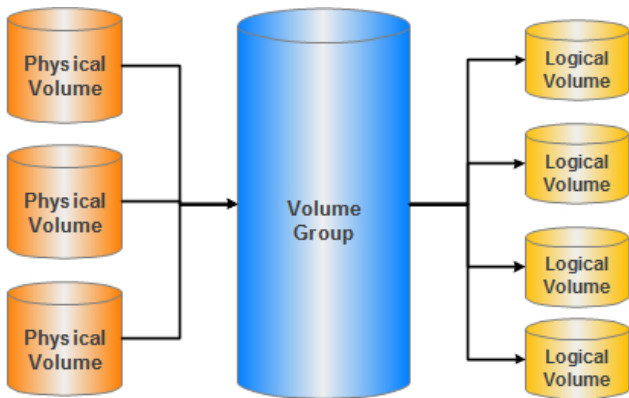
- Tanti dischi montati ovunque
- Backup difficili
- Lo spazio non basta mai
- Bisogna spegnere il server per fare manutenzione

# Problemi

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# LVM



**Note:**

Physical Volume can be a partition or whole disk but must be initialized as *physical volume (LVM PV)*

# RAID

Redundant Array of Inexpensive Disks

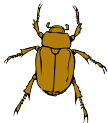
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# RAID

Redundant Array of Inexpensive Disks

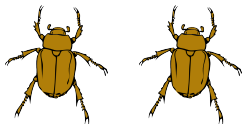
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# RAID

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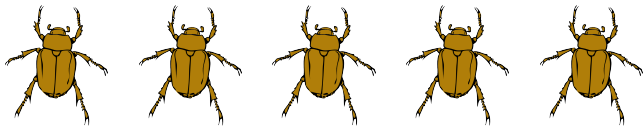
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# RAID

Redundant Array of Inexpensive Disks

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# LUKS

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# DEMO

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