

# Disk Management

Show all disks, usage, and format type

```
sudo df -T -h
```

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
udev	devtmpfs	930M	4.0K	930M	1%	/dev
tmpfs	tmpfs	191M	1.5M	190M	1%	/run
/dev/sda1	fuseblk	29G	25G	4.5G	85%	/isodevice
/dev/loop0	iso9660	1.6G	1.6G	0	100%	/cdrom
/dev/loop1	squashfs	1.5G	1.5G	0	100%	/rofs
/cow	overlay	22G	17G	4.1G	81%	/
tmpfs	tmpfs	954M	5.2M	949M	1%	/dev/shm
tmpfs	tmpfs	5.0M	4.0K	5.0M	1%	/run/lock
tmpfs	tmpfs	954M	0	954M	0%	/sys/fs/cgroup
tmpfs	tmpfs	954M	56K	954M	1%	/tmp
tmpfs	tmpfs	191M	8.0K	191M	1%	/run/user/999
tmpfs	tmpfs	191M	20K	191M	1%	/run/user/70000
google-drive-ocamlfuse	fuse.google-drive-ocamlfuse	15G	9.1G	6.0G	61%	/home/kapper/gdrive

Check /var directories for disk usage, sort and limit results to 10

```
sudo du -ah /var | sort -nr | head -n 10
```

```
924K  /var/lib/apt/lists/archive.ubuntu.com_ubuntu_dists_disco-updates_universe_i18n_Translation-en
924K  /var/cache/apparmor/26b63962.0/usr.lib.libreoffice.program soffice.bin
912K  /var/lib/texmf/web2c/pdftex/pdflatex.fmt
912K  /var/lib/texmf/web2c/pdftex/latex.fmt
888K  /var/cache/apt/archives/libgtkmm-3.0-1v5_3.24.0-2_amd64.deb
852K  /var/lib/apt/lists/security.ubuntu.com_ubuntu_dists_disco-security_main_i18n_Translation-en
828K  /var/lib/app-info/icons/ubuntu-disco-multiverse
824K  /var/lib/dpkg/info/linux-headers-5.0.0-38-generic.md5sums
817K  /var/lib/dpkg/info/linux-headers-5.0.0-13-generic.md5sums
804K  /var/log/syslog.3.gz
```

Scan this disk for usage, sort the results by directories > 1.0GB, show largest 5 results

```
sudo du -xh / | grep '^S*[0-9\\.]+G' | sort -rn | head -n 5
```

```
19G    /
9.8G   /home/kapper
9.8G   /home
6.7G   /usr
5.7G   /home/kapper/.cache
```

Show the largest 5 files on the system (greater-than 100MB), using block size of 1MB.

```
sudo find / -xdev -type f -size +100M -exec ls -l --block-size=M {} \; | sort -nk 5 -r | head -n 5
```

```
-rw-r--r-- 1 kapper kapper 174M Nov 30 06:13 /home/kapper/.local/share/JetBrains/Toolbox/apps/CLion/ch-
0/213.5744.254/lib/platform-impl.jar
-rw-r--r-- 1 kapper kapper 174M Nov 30 03:14 /home/kapper/.local/share/JetBrains/Toolbox/apps/PyCharm-P/ch-
0/213.5744.248/lib/platform-impl.jar
-rw-r--r-- 1 kapper kapper 174M Nov 27 05:41 /home/kapper/.local/share/JetBrains/Toolbox/apps/WebStorm/ch-
0/213.5744.224/lib/platform-impl.jar
-rw-r--r-- 1 kapper kapper 174M Nov 23 11:21 /home/kapper/.local/share/JetBrains/Toolbox/apps/datagrip/ch-
0/213.5744.178/lib/platform-impl.jar
-rw-r--r-- 1 kapper kapper 174M Dec  1 08:26 /home/kapper/.local/share/JetBrains/Toolbox/apps/Goland/ch-
0/213.5744.269/lib/platform-impl.jar
```

Show the 10 files consuming the most data on this system

```
sudo find / -printf '%s %p\n' | sort -nr | head -10
```

```
140737477885952 /proc/kcore
24244125696 /isodevice/casper-rw
3296907264 /media/lubuntu/37aba99c-8b85-4ddc-92eb-6f50251041e8/encrypted.block
1890263040 /media/lubuntu/37aba99c-8b85-4ddc-92eb-
6f50251041e8/home/.shadow/362074638d2508061facd43743c9f08ff66866b8/mount/ASTjdxE5eNzc0F3IkW870B
/4HICtmqSNBNCh4oi+U7116prbiG
1657700352 /isodevice/lubuntu-19.04-desktop-amd64.iso
1589342208 /cdrom/casper/filesystem.squashfs
471728128 /media/lubuntu/37aba99c-8b85-4ddc-92eb-
6f50251041e8/home/.shadow/362074638d2508061facd43743c9f08ff66866b8/mount/ASTjdxE5eNzc0F3IkW870B
/MK3nIrbwT+ZzY8n1fczEqB/Yqt2q,akFt0Uj7WDNJaHdNA0GbKtnhX7kza2zeVnGMI/E1hEyvd6NZ1+JT6hgxI2zA/JekS
pYOtLWQPv0kgorVJuFbCcIG/LRriMSOWaunntY7RsNuiUC/x+gYqqpRFtEjXG+JzztvwIQ4LDeq82QY
```

```
268435456 /sys/devices/pci0000:00/0000:00:02.0/resource2_wc
268435456 /sys/devices/pci0000:00/0000:00:02.0/resource2
137797651 /home/kapper/.local/share/Steam/ubuntu12_64/libcef.so
```

Print information on all connected block devices

```
sudo lsblk

sda      8:0    0 931.5G  0 disk
├─sda1   8:1    0  128M  0 part
├─sda2   8:2    0 925.5G  0 part
└─sda3   8:3    0   5.9G  0 part
```

Print the UUIDs of all connected block devices, along with some other hardware information

```
sudo blkid

/dev/sdb2: UUID="436b3ae3-4301-4b8a-80d3-fdf52c7d7059" TYPE="swap" PARTUUID="590670f6-3b89-41b5-b474-fcd6c048628d"
```

Print information on partitions on all connected block devices

```
sudo parted -l

Model: HDD A12345678-B3210 (scsi)
Disk /dev/sdb: 2000GB
Sector size (logical/physical): 512B/4096B
Partition Table: gpt
Disk Flags:

Number Start   End     Size    File system  Name  Flags
 1    1049kB 1000MB  999MB   fat32                boot, esp
 2    1000MB 17.0GB 16.0GB  linux-swap(v1)
 3    17.0GB 117GB  100GB   ext4
 4    117GB  217GB  100GB   ext4
 5    217GB  427GB  210GB   ext4
```

Print information given a specific block device (partitions)

```
sudo tune2fs -l /dev/sdb3

tune2fs 1.45.4 (23-Sep-2019)
```

Filesystem volume name: <none>  
Last mounted on: /  
Filesystem UUID: fagbraetd325t9-6gafdee7-4d2344agdd-93d2-6f4safsa5d6  
Filesystem magic number: 0xEF53  
Filesystem revision #: 1 (dynamic)  
Filesystem features: has\_journal ext\_attr resize\_inode dir\_index filetype needs\_recovery extent 64bit flex\_bg sparse\_super large\_file huge\_file dir\_nlink extra\_isize metadata\_csum  
Filesystem flags: signed\_directory\_hash  
Default mount options: user\_xattr acl  
Filesystem state: clean  
Errors behavior: Continue  
Filesystem OS type: Linux  
Filesystem created: Mon Oct 14 12:34:48 2019  
Last mount time: Thu Oct 24 12:27:30 2019  
Last write time: Thu Oct 24 12:27:30 2019  
Mount count: 50  
Maximum mount count: -1  
Lifetime writes: 50 GB  
Default directory hash: half\_md4  
Directory Hash Seed: 4e7gds499c3-8532e0-452356c-432890c-d0fds43e2be81ee  
Journal backup: inode blocks  
Checksum type: crc32c  
Checksum: 0xb054235dk

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