


Disk Commands in Linux

Mastering basic disk-related commands is essential for any Linux system admin. Get familiar with these fundamental commands to easily manage and troubleshoot your filesystem.

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```
tem, 0.0% interrupt, 100% idle
tem, 0.0% interrupt, 100% idle
wap: 0K/2055M used/tot
```

```
WAIT      TIME      CPU COMMAND
poll      0:06      0.00% mpd
poll      1:34      0.00% mpd
poll      0:00      0.00% mpd
poll      0:00      0.00% scmpc
kqread    0:00      0.00% apmd
select    0:00      0.00% httpd
select    0:00      0.00% sendmail
poll      0:01      0.00% logfmon
select    0:02      0.00% sshd
nfsd      0:02      0.00% nfsd
nfsd      0:01      0.00% nfsd
poll      0:00      0.00% tmux
select    0:00      0.00% cron
ttyin     0:00      0.00% ksh
poll      0:00      0.00% syslogd
poll      0:00      0.00% ncpc
select    0:00      0.00% emacs
```

```
client_ctx *cctx)
t client_ctx *cctx)
```

```
NULL, 0);
```

```
x)
```

```
);
```

```
NULL, 0);
```

```
0) Hg-0 (Diff)-----
```

```
5: ksh 6: ksh 7: ksh 8: ksh* 9: ksh 10: ksh 11: ksh
```

20:28:31

```
nicholas@yela
tmux-borders
tmux-bsdauth
tmux-cfgcur
tmux-imsgr-12
tmux-imsgr1.d
tmux-imsgr2.d
tmux-modesea
nicholas@yela
```

```
nicholas@yelena 0 1 ~$
```

```
nicholas@yelena 0 1 ~$
```

```
nicholas@yelena 0 1 ~$
```

```
nicholas@yelena 0 1 ~$ []
```

```
nicholas@yelena 0 1 ~$
```

 Made with Gamma

df - disk free

What it does:

Displays free disk space statistics for all mounted filesystems.

When to use it:

When you want to keep an eye on your system's disk usage and available disk space.

Pro tip:

Use the `-h` flag to make the output more human-readable.

du - disk usage



What it does:

Displays disk usage statistics for a specific file or directory.

```
rick@alien:~/mtd/ebin$ cat weather.txt
Weather report: Edmonton
Sunny
-13/-14 °C
22 km/h
14 km
0.9 mm
March 2018
Su Mo Tu We Th Fr Sa
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31
rick@alien$ cat systeminfo.txt
OS: Ubuntu 16.04 xenial
Kernel: x86_64 Linux 4.14.27-041427-generic
Uptime: 1h 41m
Packages: 2134
Shell: bash 4.3.48
Resolution: 1920x2160
DE: Unity 7.4.0
WM: Compiz
WM Theme: Ambiance
Icon Theme: ubuntu-mono-dark
GTK Theme: Ambiance [GTK2/3]
Font: Ubuntu 11
Icon Theme: ubuntu-mono-dark
CPU: Intel Core i7-6700HQ CPU @ 3.5GHz
GPU: Mesa DRI Intel(R) HD Graphics 530 (Skylake GT2)
RAM: 1981MiB / 7581MiB
```

When to use it:

When you want to find out which directory or file is taking up the most space.

```
rick@alien:~/mtd/ebin$ du -sh
packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 546.528/546.528/546.528/0.000 ms
(rick@localhost ~)$ pwd
/root
(rick@localhost ~)$ cd /var
(rick@localhost var)$ ls -la
total 12
drwxr-xr-x 18 root root 4096 Jul 30 22:42 .
drwxr-xr-x 23 root root 4096 Sep 14 20:42 ..
drwxr-xr-x  2 root root 4096 May 14 08:15 account
drwxr-xr-x 11 root root 4096 Jul 31 22:26 cache
drwxr-xr-x  3 root root 4096 May 18 16:03 db
drwxr-xr-x  3 root root 4096 May 18 16:03 empty
drwxr-xr-x  2 root root 4096 May 18 16:03 games
drwxr-xr-x  2 root root 4096 May 18 16:03 local
lrwxrwxrwx  1 root root 11 May 14 08:12 lock -> ../run/lock
drwxr-xr-x 16 root root 4096 Sep 14 20:42 log
drwxr-xr-x  1 root root 10 Jul 30 22:43 mail -> spool/mail
drwxr-xr-x  2 root root 4096 May 18 16:03 misc
drwxr-xr-x  2 root root 4096 May 18 16:03 opt
drwxr-xr-x  2 root root 4096 May 18 16:03 preserve
drwxr-xr-x  2 root root 4096 Jul 1 22:11 report
lrwxrwxrwx  1 root root  6 May 14 08:12 run -> ../run
drwxr-xr-x 16 root root 4096 May 18 16:03 spool
drwxrwxrwt  4 root root 4096 Sep 12 23:50 tmp
drwxr-xr-x  2 root root 4096 May 18 16:03 yp
(rick@localhost var)$ yum search wiki
Loaded plugins: langpacks, presto, refresh-packagekit, remove-with-leaves
rpmfusion-free-updates
rpmfusion-free-updates/primary_db
rpmfusion-nonfree-updates
updates/metalink
updates
2.7 kB 00:00
296 kB 00:04
2.7 kB 00:00
5.5 kB 00:00
4.7 kB 00:00
```

Pro tip:

Use the -s flag to display only a summary of disk usage.

fdisk - format disk

What it does:

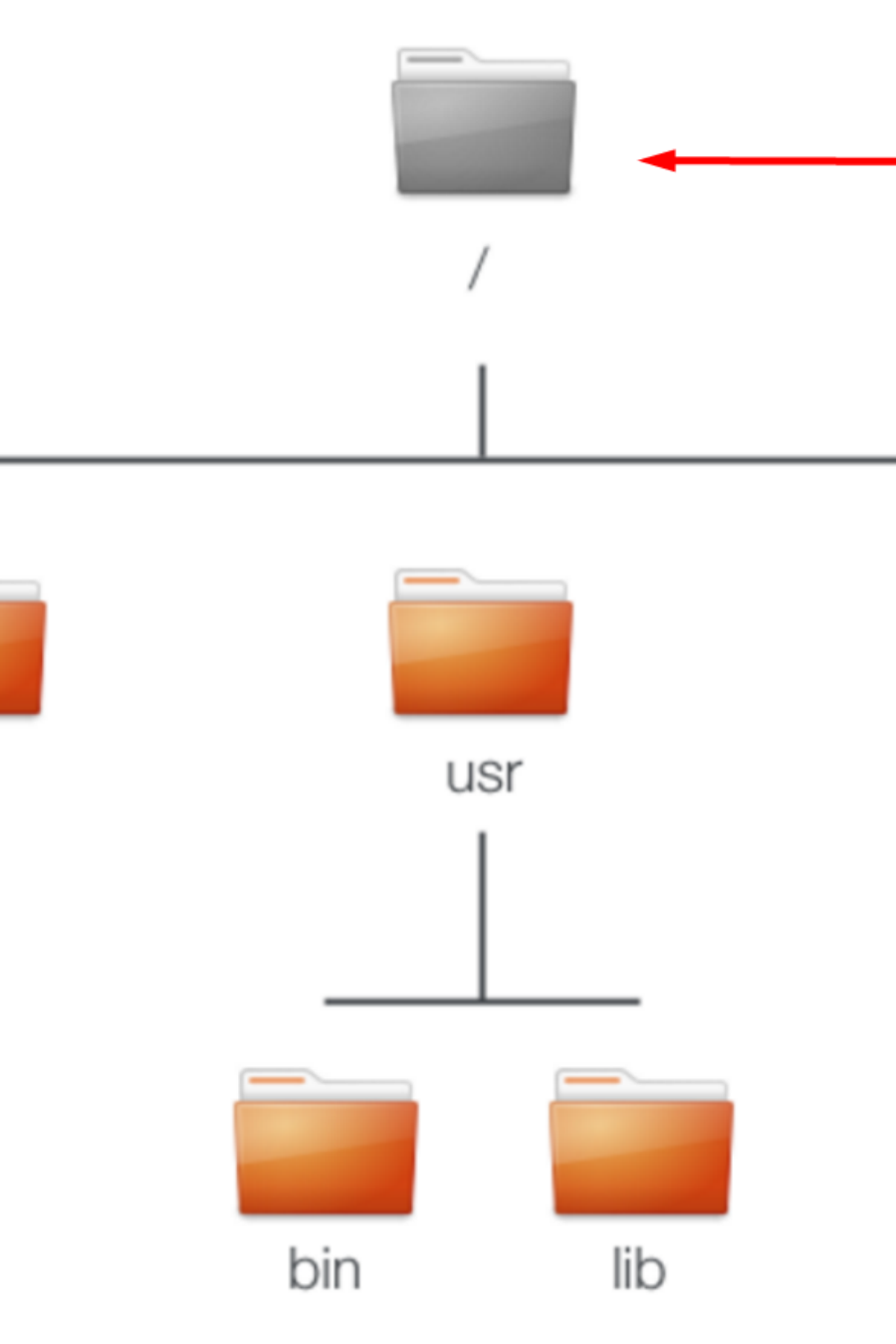
Creates, resizes, and deletes partitions on a disk.

When to use it:

You want to configure your hard drive partitions.

Pro tip:

Make sure you have backups before performing any disk partitioning. This command can cause data loss if used incorrectly.



mkfs - make filesystem

1

What it does:

Creates a filesystem on a disk partition.

2

When to use it:

You have created a new disk or partition and want to format it with a specific filesystem.

3

Pro tip:

Use the `-t` flag to specify the type of filesystem you want to create, e.g. `ext4`.

mount

What it does:

Attaches a filesystem to the system's file hierarchy.

When to use it:

You want to make a filesystem available for use by the system.

Pro tip:

Make sure you have created the mount point directory before using this command.

umount

1

What it does:

Detaches a filesystem from the system's file hierarchy.

2

When to use it:

You want to make a filesystem unavailable for use by the system.

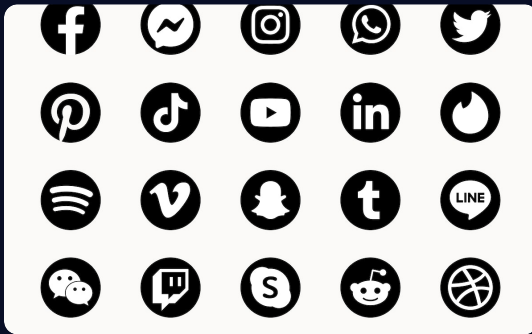
3

Pro tip:

Always make sure no files are in use before unmounting a filesystem.



sync



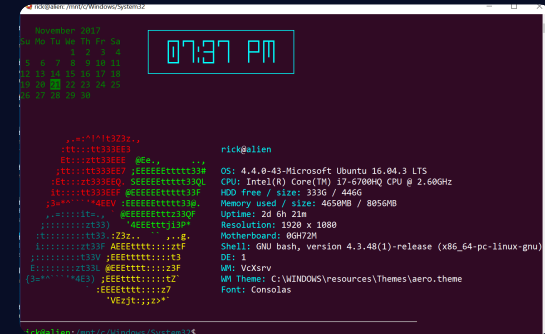
What it does:

Flushes file system buffers to disk.



When to use it:

You want to make sure all data has been written to disk before removing it.



Pro tip:

Always use this command before removing or unmounting a disk or partition.

ion. All rights reserved.

iles took 697ms.

fuser

1

What it does:

Displays which process is using a file or directory.

2

When to use it:

You want to find out why a particular file or directory cannot be unmounted or removed.

3

Pro tip:

Combine with the `-m` flag to specify a mount point to search for processes using any file on that filesystem.

chown

What it does:

Changes the owner of a file or directory.

When to use it:

You want to change the owner of a file or directory.

Pro tip:

Be careful when changing ownership of system files, as it can cause issues with various applications.

chmod



dd - disk dump

What it does:

Copies and converts files or blocks of data.

When to use it:

You want to create an exact backup of a disk or copy large amounts of data with specific block sizes.

Pro tip:

Be careful when using this command, as it has the potential to overwrite data and cause data loss.

fsck - filesystem check

What it does:

Scans and repairs a filesystem.

When to use it:

You suspect your filesystem may be corrupted or have data errors.

Pro tip:

Run this command with the `-y` flag to automatically answer "yes" to all prompts for fixing errors.