

File Permissions in Linux

File permissions in Linux are crucial for controlling access to files and directories. Understanding how file permissions work is essential for maintaining the security and integrity of your system.

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bootstrap.css 199 KB
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General:

Kind: PlainTextType
Size: 199,412 bytes (201 KB on disk)
Where: Macintosh HD ▸ Users ▸ mcone ▸ Downloads ▸ bootstrap-4.6.0-dist ▸ css
Created: January 19, 2021 at 8:17 AM
Modified: January 19, 2021 at 8:17 AM

Stationery pad
 Locked

More Info:
Name & Extension:
Comments:
Open with:
Preview:
Sharing & Permissions:

You can read and write

Name	Privilege
mcone (Me)	Read & Write
staff	Read only
everyone	Read only

+ | - | ○ ▾

Made with Gamma

Type of Files

Regular Files

A regular file contains data and can be edited by users.

Directories

Directories are used to organize files and other directories.

Symbolic Links

Symbolic links are references to other files or directories.

Character Devices

Character devices enable communication with hardware.



Owner Permissions

1 Read

Allows the owner to view
the contents of the file.

2 Write

Allows the owner to modify
the contents of the file.

3 Execute

Allows the owner to
execute the file as a
program.



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Group Permissions

1 Read

Allows group members to view the contents of the file.

2 Write

Allows group members to modify the contents of the file.

3 Execute

Allows group members to execute the file as a program.



Others Permissions

1 Read

Allows all other users to view the contents of the file.

2 Write

Allows all other users to modify the contents of the file.

3 Execute

Allows all other users to execute the file as a program.



Useful Linux Commands

Mastering Linux commands can greatly enhance your productivity and efficiency. Here are some essential commands to help you manage and navigate through your Linux system.

```
fa.wikipedia.org
g (208.80.152.2) 56(84) bytes of data.

    ping statistics ---
    received, 0% packet loss, time 0ms
28/540.528/540.528/0.000 ms

5 Jul 30 22:43 .
5 Sep 14 20:42 ..
5 May 14 00:15 account
5 Jul 31 22:26 cache
5 May 18 16:03 db
5 May 18 16:03 empty
5 May 18 16:03 games
5 Jun  2 18:39 gdm
5 May 18 16:03 lib
5 May 18 16:03 local
1 May 14 00:12 lock -> ../run/lock
5 Sep 14 20:42 log
9 Jul 30 22:43 mail -> spool/mail
5 May 18 16:03 nis
5 May 18 16:03 opt
5 May 18 16:03 preserve
5 Jul  1 22:11 report
5 May 14 00:12 run -> ../run
5 May 18 16:03 spool
5 Sep 12 23:50 tmp
5 May 18 16:03 yp
arch wiki
resto, refresh-packagekit, remove-with-leaves
ry_db
```

Managing Processes

ps

Display information about running processes.

- `ps aux`: Detailed view of all processes
- `ps -ef`: Another way to view processes
- `ps -p <PID>`: Show specific process details

top

View a dynamic display of system processes.

- `top`: Real-time updating view
- `top -u <username>`: Processes for a specific user

htop

A more interactive and user-friendly alternative to top.

- `htop`: Similar to top with enhanced features



Process Termination

kill

Terminate processes with specified signals.

- `kill <PID>`: Gracefully terminate a process
- `kill -9 <PID>`: Forcefully terminate a process
- `killall <process_name>`: Terminate all processes with a specific name

pkill

Terminate processes based on criteria.

- `pkill -SIGTERM <process_name>`: Terminate processes matching the name
- `pkill -u <username>`: Terminate processes owned by a specific user

pgrep

List PIDs of processes based on criteria.

- `pgrep <process_name>`: List PIDs of processes matching the name
- `pgrep -u <username>`: List PIDs of processes owned by a specific user



Additional Helpful Commands

renice

Adjust the priority of a process.

- `renice <priority> <PID>`: Set the priority (nice value) of a process

nohup

Run a command immune to terminal hangups.

- `nohup <command> &`: Run a command in the background

at

Schedule tasks to run at specific times.

- `at now + 1 hour`: Schedule a task to run in 1 hour
- `at -l`: View pending at jobs
- `at -r <job_number>`: Remove an at job



cron

Automate tasks to run at specified intervals.

- `crontab -e`: Edit the current user's crontab file
- `crontab -l`: List the current user's crontab entries

bg

Resume a stopped background job.

- `bg`: Bring the most recently stopped background job to the foreground

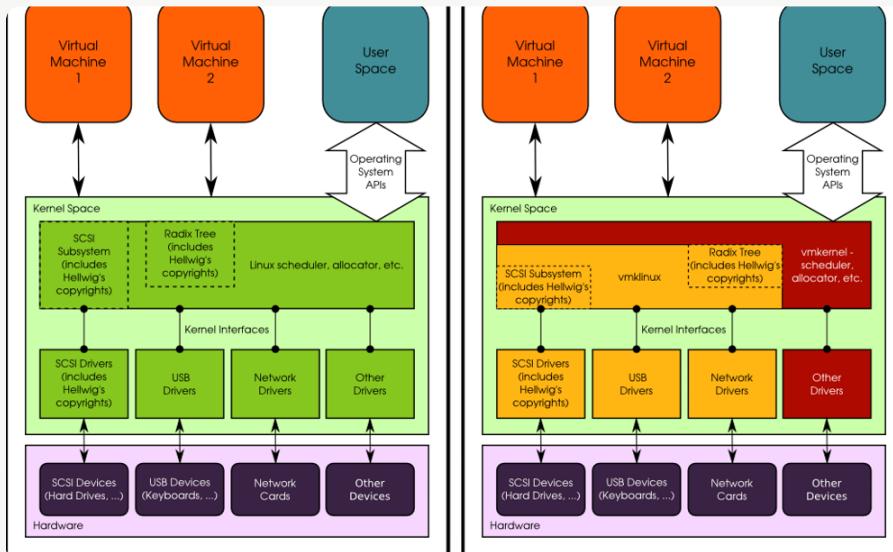
fg

Bring a job to the foreground.

- `fg %1`: Bring job 1 to the foreground



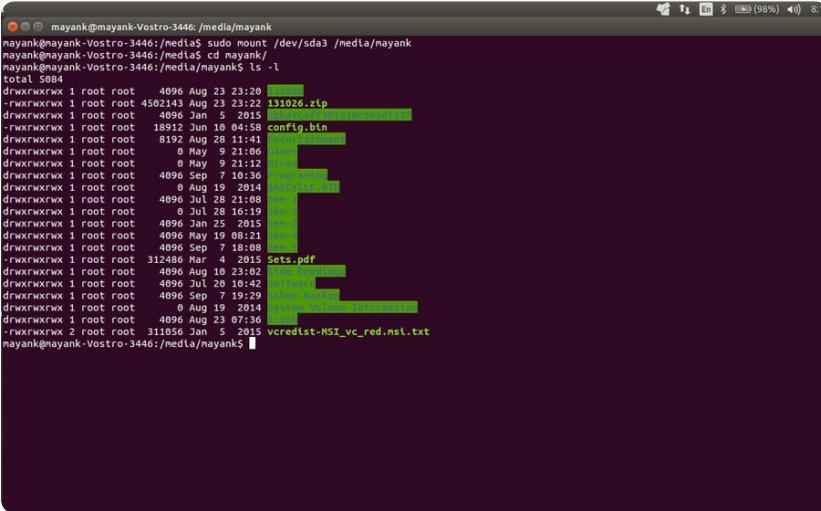
Process Visualization



pstree

Display the hierarchy of processes.

Become a Linux Power User



```
mayank@mayank-Vostro-3446:~/media/mayank$ sudo mount /dev/sda3 /media/mayank
mayank@mayank-Vostro-3446:~/media$ cd mayank/
mayank@mayank-Vostro-3446:~/media/mayank$ ls -l
total 5984
drwxrwxrwx 1 root root 4096 Aug 23 23:20 .
-rw-rw-rwx 1 root root 4582143 Aug 23 23:22 131026.rtp
drwxrwxrwx 1 root root 4096 Jan 5 2015 config
drwxrwxrwx 1 root root 18912 Jun 18 04:58 config.btn
drwxrwxrwx 1 root root 8192 Aug 28 11:48 config.drm
drwxrwxrwx 1 root root 4096 May 9 21:12 config.kms
drwxrwxrwx 1 root root 4096 Sep 7 10:36 config.nouveau
drwxrwxrwx 1 root root 4096 Aug 19 2014 config.vc
drwxrwxrwx 1 root root 4096 Jul 28 21:08 gams
drwxrwxrwx 1 root root 4096 Jul 28 16:19 gams.s
drwxrwxrwx 1 root root 4096 Jan 25 16:59 gams.s.s
drwxrwxrwx 1 root root 4096 May 9 08:21 gams.s.s.s
drwxrwxrwx 1 root root 4096 Sep 7 18:08 Sets.pdf
drwxrwxrwx 1 root root 4096 Aug 18 23:02 Sets.headline
drwxrwxrwx 1 root root 4096 Jul 20 10:42 softlock
drwxrwxrwx 1 root root 4096 Sep 7 19:26 vcredist
drwxrwxrwx 1 root root 4096 Aug 23 07:34 vcredist.msi
drwxrwxrwx 2 root root 311056 Jan 5 2015 vcredist-MSI_vc_red.msi.txt
mayank@mayank-Vostro-3446:~/media/mayank$
```

nice

Start a process with a specific priority.



```
File Edit View Search Terminal Help
root@linux:~$
```

jobs

Display a list of jobs running in the background.

Conclusion

Congratulations! You've learned about file permissions and essential Linux commands to manage processes effectively. These skills will empower you to take full control of your Linux system. Keep exploring and experimenting to further enhance your expertise.