

Basic Linux Commands

File and Directory Commands

- Show current directory → `pwd`
- List files and directories → `ls`
- Change directory → `cd <directory>`
- Create a new directory → `mkdir <directory_name>`
- Remove a directory → `rmdir <directory_name>`
- Create a file → `touch <filename>`
- View file contents → `cat <filename>`
- Copy a file → `cp <source> <destination>`
- Move or rename a file → `mv <source> <destination>`
- Delete a file → `rm <filename>`

Memory Usage Commands

- Check memory usage in MB → `free -m`
- Check memory usage in GB → `free -g`
- Check detailed memory usage → `cat /proc/meminfo`
- Show memory usage per process → `ps aux --sort=-%mem | head`
- Monitor memory usage live → `vmstat 1`

CPU Usage Commands

- Check CPU usage → `top`
- Interactive CPU and process monitor → `htop`
- CPU usage summary → `mpstat`
- Check CPU details → `lscpu`
- Monitor CPU usage over time → `sar -u 1 5`

Process Management Commands

- List running processes → `ps aux`
- List all processes in tree format → `pstree`
- Kill a process by PID → `kill <PID>`
- Force kill a process → `kill -9 <PID>`
- Kill a process by name → `pkill <process_name>`
- Check a specific process by name → `pgrep <process_name>`
- Monitor real-time processes → `top`
- Show process hierarchy → `ps fax`
- Check process details by PID → `cat /proc/<PID>/status`
- Find which process is using a port → `netstat -tulnp | grep <port>` or `ss -tulnp | grep <port>`

User and System Information

- Switch user → su <username>
- Run command as root → sudo <command>
- Show current user → whoami
- Show active users → who
- Show system uptime → uptime

Disk and Network Commands

- Show disk usage → df -h
- Show memory usage → free -m
- Find a file → find /path -name <filename>
- Search text in a file → grep 'text' <filename>
- Check network connectivity → ping <website>
- Show IP address → ifconfig (deprecated) or ip a
- Download files → wget <URL>

File Compression Commands

- Extract tar files → tar -xvf <file.tar>
- Compress files to tar.gz → tar -czvf <file.tar.gz> <directory>

Help Commands

- Show manual of a command → man <command>
- Show command history → history

Sorting and Piping Commands

- Sort a file alphabetically → sort <filename>
- Sort a file in reverse order → sort -r <filename>
- Sort by numeric values → sort -n <filename>
- Sort and remove duplicates → sort -u <filename>
- Use pipe to filter output → command1 | command2
- Send output to a file → command > output.txt
- Append output to a file → command >> output.txt
- Use pipe to search text → command | grep 'text'

Date and Time Commands

- Display current date and time → date
- Format date output → date '+%Y-%m-%d %H:%M:%S'
- Show yesterday's date → date --date='yesterday'
- Show tomorrow's date → date --date='tomorrow'
- Convert timestamp to date → date -d @<timestamp>