

Common Linux Command Lines

Pedram Pasandide

Introduction

Linux provides a variety of command-line utilities for tasks ranging from file management to system monitoring and networking. Below is a categorized list of commonly used Linux terminal commands.

File and Directory Management

- `ls`: Lists directory contents.
 - Example: `ls -l` (detailed listing)
- `cd`: Changes the current directory.
 - Example: `cd /home/user/`
- `pwd`: Prints the current working directory.
- `mkdir`: Creates a new directory.
 - Example: `mkdir new_folder`
- `rmdir`: Removes an empty directory.
 - Example: `rmdir old_folder`
- `rm`: Removes files or directories.
 - Example: `rm file.txt`, `rm -r folder_name`
- `cp`: Copies files and directories.
 - Example: `cp source.txt destination.txt`

- **mv**: Moves or renames files and directories.
 - Example: `mv file.txt new_location/`
- **touch**: Creates an empty file.
 - Example: `touch newfile.txt`
- **find**: Searches for files in a directory hierarchy.
 - Example: `find /path -name "file.txt"`
- **stat**: Displays detailed information about a file.

Viewing and Editing Files

- **cat**: Displays file contents.
 - Example: `cat file.txt`
- **more**: Views file content one screen at a time.
- **less**: Similar to **more** but allows backward navigation.
- **nano**, **vi**, **vim**: Text editors for editing files.
 - Example: `nano file.txt`
- **head**: Displays the first lines of a file.
 - Example: `head -n 10 file.txt`
- **tail**: Displays the last lines of a file.
 - Example: `tail -f log.txt`

Permissions and Ownership

- **chmod**: Changes file permissions.
 - Example: `chmod 755 file.sh`
- **chown**: Changes file ownership.
 - Example: `chown user:group file.txt`

System Information and Monitoring

- **uname**: Shows system information.
 - Example: `uname -a`
- **df**: Displays disk space usage.
 - Example: `df -h`
- **du**: Shows disk usage of files and directories.
 - Example: `du -sh folder/`
- **top**: Displays real-time system processes.
- **htop**: Enhanced version of **top** (requires installation).
- **free**: Shows memory usage.
 - Example: `free -h`
- **uptime**: Displays system uptime.
- **who**: Shows who is logged in.

Process Management

- **ps**: Lists running processes.
 - Example: `ps aux`
- **kill**: Terminates a process by PID.
 - Example: `kill 1234`
- **killall**: Terminates all processes by name.
 - Example: `killall firefox`
- **jobs**: Lists background jobs.
- **bg/bg**: Resumes background jobs in the background/foreground.

Networking

- **ping**: Checks network connectivity to a host.
 - Example: `ping google.com`
- **curl**: Fetches content from a URL.
 - Example: `curl http://example.com`
- **wget**: Downloads files from a URL.
- **ifconfig/ip**: Shows or configures network interfaces.
 - Example: `ip a`
- **netstat/ss**: Displays network connections.
- **scp**: Securely copies files between hosts.
 - Example: `scp file.txt user@remote:/path/`

Compression and Archiving

- **tar**: Archives files.
 - Example: `tar -cvf archive.tar file/`
- **gzip/gunzip**: Compresses/Decompresses files.
 - Example: `gzip file.txt`
- **zip/unzip**: Creates/extracts ZIP archives.
 - Example: `zip archive.zip file/`

Package Management

- **apt** (Debian/Ubuntu): Manages software packages.
 - Example: `sudo apt update && sudo apt upgrade`
- **yum/dnf** (RHEL/Fedora): Manages software packages.

- `pacman` (Arch): Manages software packages.
 - Example: `sudo pacman -Syu`

Miscellaneous

- `echo`: Prints text to the terminal.
 - Example: `echo "Hello, World!"`
- `date`: Displays the current date and time.
- `man`: Opens the manual for a command.
 - Example: `man ls`
- `alias`: Creates command shortcuts.
 - Example: `alias ll="ls -la"`
- `history`: Shows the command history.
- `clear`: Clears the terminal screen.