

# Basic Commands

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## Movement & File Manipulation

```
ls #list - list files in directory
cd #change directory - move in and out of folders
mv #move - move a file/folder from one place to another OR rename file/folder
cp #copy - copy a file/folder
rm #remove - remove a file (can remove folders with -rf)
rmdir # remove directory - remove an empty folder
ln | Symbolic Link
```

## Displaying Outputs & Filtering

```
cat # concatenate - display text from file
strings # similar to cat, works well for binaries and executables
grep # global regular expression search/and print - used to grab strings and filter by them
head # display top results
less # display a summarised output
tail # display the most recent outputs
find # Find a file/folder based on filters
locate # Locate file or applications
where # Find application directory
```

## Special Characters

```
$ # Used to call/reference variables
? # Single Character Wildcard
# # Comments
* # Wildcard
! # Logical Operator (NOT GATE)
~ # Home Directory
. # Current Directory
.. # Previous/Parent Directory
; # Shell Command Separator
& # Background Process
| # Pipe
< # Input Redirector
> # Output Redirector
/ # Root Directory
```

## Important Commands

```
uname # Display hostname, group, id, and distro information
man # manual, shows you help for commands you run
tldr # same with man with less output - sudo apt-get install tldr
ps # show running processes
pstree # display tree of processes
pgrep # look up or signal processes based on name+
top # display and update processes
atop # advanced top, same thing with more functionality
htop # same as ps but looks nicer
netstat # shows network information and ports
ifconfig / ip # shows interfaces, IP Address, MAC Addresses, and allow you to change network info
iwconfig # same thing but for wireless interfaces
```

# System Commands

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## View System Logs

```
dmesg
journalctl
systemctl
```

## Firewall & Security

```
sudo # Super User (Do) - switches to the root user/allows admin permissions for commands
iptables # Complicated firewall
ufw # Uncomplicated Firewall
fail2ban # Blocks access to SSH after # of failed retries
veracrypt # File and Disk Encryption
clamav # Clam Antivirus
shred # Makes a file unreadable
```

## Disks

```
lsblk # List Block - display device storage, same with df and fdisk
fsck # Repair File System
mount # Mount disk
umount # Unmount disk
```

# File Sharing & Hosting

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# File Sharing

```
smbclient # Client to connect to SMB Server (Linux/Windows)
nfs # Client to mount nfs file shares - must install nfs-common to use with mount
ftp # File Transfer Protocol, used to share files in a network
ssh # Secure Shell, newer version of ftp, can be used to remotely administer computers
```

# Server Hosting

```
python3 -m http.server # SimpleHTTPServer python library, can transfer small amounts of data

/var/www/html/apache2 # Apache2 Web Server, can be used to host files or websites

smbserver # Hosts SMB File Shares

vsftpd # FTP Server

sftpd # Secure FTP Server
```

# Important & Interesting Directories

```
/ # Root Directory

/bin # Hosts all the binaries
/usr/bin # Same as above
/var/logs # System Logs
/etc/cron # Cron Tasks - used for automation

~/.ssh # Has the private, public, and authorized_keys for SSH Access

~/.bashrc # Bash Profile - loads up on system start ~/.zshrc
~/.profile # User Profile - contains PATHs
~/.bash_history # Command Logs, same with ~/.zsh_history

/proc/cpuinfo # Shows CPU Info and vulnerabilities if SUDO (You can tell from the version)
```