# Linux

## General

### Shell

- install and config **zsh**
  - [LINK](LINK)
- create new file

```
touch <filename>
```

- create a range of files
  - example:

```
touch myfiles{1..10}.txt
```

- `grep` one of the most practical linux commands for filtering:
  - example:

```
ls | grep <wanted-folder>
```

  > you have very very practical flag `-v` that **exclude** files.

- how to see current user in cli

```
whoami
```

- recommended to don't install snap on linux!
- just try download the file from the internet.
- how to see the hostname

```
hostname
```

- how to see the hostname ip in LAN

```
hostname -I
```

> first ip is your ipv4 in LAN

- how to see the current port usuage:

```
sudo lsof -i -P -n | grep LISTEN
```

- add `alias` permanently in one command

```
echo "alias aliasname='aliascommand'" >> ~/.bashrc && source ~/.bashrc
echo "alias aliasname='aliascommand'" >> ~/.zshrc && source ~/.zshrc
```

- add app to path

```
echo 'export PATH=/your/directory/path:$PATH' >> ~/.bashrc && source ~/.bashrc
```

- see the disk usage of folders and files:

```
df -h <your-path>
```

  - example:

    ```
    df -h /
    ```

  - or

    ```
    sudo du -h --max-depth=1
    ```

- see the partitions

```
lsblk
```

- go to your flash removable

```
cd /run/<username>/<medianame>
```

- find in file contents

```
grep -rnw yourpath -e "yourregex"
```

- go to terminal before login to linux shortcut:
  - `ctrl + alt + f2`
  - for back to graphical:
    - `ctrl + alt + f1` (centos worked)
    - `ctrl + alt + f7` (mint worked)
- how to run `.jar` file

```
java -jar yourjarfile.jar
```

- network manager setting from terminal with ui

```
nmtui
```

- see which ports are used!
```

```
netstat -tunlp
```

- see port status

```
nmap -p 5432 172.19.0.3
```

- remove a file recursively

```
find . -name "FILENAMEWILDCARD" -delete
```

- increase the time login time

```
sudo visudo
```

```
Defaults        timestamp_timeout=240 # in minutes (4 hours)
```

- running and background and also saving logs!

```
yourcommand >output.log 2>&1 &
```

- see your background procceses

```
jobs
```

- The `+` symbol indicates the current job. This is the job that will be affected by commands like fg or bg if you don't specify a job ID.
- The `-` symbol indicates the previous job (the one before the current job).
- Other jobs do not have a symbol.
- Running
    - The job is actively running in the background.
- Stopped
    - The job has been paused (e.g., with Ctrl+Z).
- Done
    - The job has completed execution.
- brings job [1] to the foreground.

```
fg %1
```

- resumes job [1] in the background.

```
bg %1
```

- kills job [1].

```
kill %1
```

- to beautify the `json` format

```
jsonoutputer | jq .
```

- see log online

```
tail -f output.log
```

- find and replace all command from out of text file

```
sed 's/pattern/replacement/g' file
```

```
sed -i 's/pattern/replacement/g' file
```

```
sed -i.bak 's/pattern/replacement/g' file
```

## systemd

- start the service

```
systemctl start yourservice.service
```

- stop the service

```
systemctl stop yourservice.service
```

- restart the service

```
systemctl restart yourservice.service
```

- enable the service to run after boot

```
systemctl enable yourservice.service
```

- diable the service to run after boot

```
systemctl diable yourservice.service
```

## ssh

- get a file from remote

```
scp remoteuser@remotehostip:/path/to/file localdirectory
```

- get a folder complete from remote

```
scp -r remoteuser@remotehostip:/path/to/directory localdirectory
```

- send a file to destination ip

```
scp filepath remoteuser@remotehostip:/remote/to/directory
```

- send a folder to destination ip

```
scp -r folderpath remoteuser@remotehostip:/remote/to/directory
```

- copy files with progress status

```
rsync -ah --progress source destination
```

- sha2 hash of string

```
echo -n "your text" | sha256sum
```

- send DHCP

```
sudo dhclient -r
sudo dhclient
```

- see all process

```
ps aux | grep whatyouwant
```

- kill process

```
sudo kill -9 pid
```

- see app for port usage

```
sudo lsof -i :5432
```

# Snap

- installing

```
sudo snap install <your-package>
```

- removing

```
sudo snap remove <your-package>
```

# Security

### File Encryption

### GPG (GNUPG)

- generate keys

```
gpg --gen-key
```

- see your keys

```
gpg --list-secret-keys
```

- export your keys

```
gpg --export-secret-keys [key-id | email] > private_key.asc
```

- import your keys

```
gpg --import private_key.asc
```

- delete a key

```
gpg --delete-key [KeyID]
gpg --delete-secret-key [KeyID]
```

- symmetric encryption with just passphrase! (*very practical*)

```
gpg -c --no-symkey-cache <filename>
```

- assymetric encryption with pair key

```
gpg -e -r <key-email> <filename>
```

- now decrypt symmetric

```
gpg -d <filename>.gpg > <filename>
```

# GUI's

## Cinammon

- file manager: nemo

## Xfce

- file manager: thunar
- disk usage analyzer: baobab
- pdf reader: xreader

- text editor: xed

## Gnome

- file manager: nautilus
- disk usage analyzer: baobab
- pdf reader: xdg-open
- text editor: gedit

# Distros

## Debian

- install `.deb` package

```
sudo dpkg -i <packagepath>
```

- remove `.deb` package

```
sudo dpkg -r <packagepath>
```

## Mint

- mint has has no default root password!, you should set for it

```
sudo passwd root
```

- install `.deb` package

```
sudo dpkg -i <packagepath>
```

- remove `.deb` package

```
sudo dpkg -r <packagepath>
```

- for becoming root user

```
sudo su
```

## fedora

- see the all installed Packages

```
rpm -aq
```

- export `rpm` file.

```
sudo yum install rpmrebuild
```

- create `rpm`

```
rpmrebuild your_app_name
```

## centos

- if the root disk usage become 100% your operating system does not boot completely!!!
  - you probably go to your virtual terminal with `ctrl+alt+f2` shortcut to remove some of your data for booting completely!

# Apps and Packages

## ncat

- a package for general-purpose command-line tool for reading, writing, redirecting and encrypting data across a network.
- run server

```
nc -lv <port>
```

- sending data to server

```
nc -v localhost <port>
```

## Firefox

- open app

```
firefox
```

## Google Chrome

- open app

```
google-chrome
```