LAB : Scripting, Manage Startup Process and Services

systemctl = system control

\# systemctl reboot   ⌀ unplugging power

$ sudo systemctl reboot   --force   --force
               poweroff

        shutdown   02:00   ⟶   차이: shutdown
                                                      └ 내부적으로 poweroff
                +15   but 가능 유무 (like 예약)

        shutdown   -r   02:00
              =reboot
                        +15

                    +1   'message'

script.sh ———————→ | #!/bin/bash   = #! shebang , command interpreter location

| # comment

backup script! using script

file 여부 확인

(if) (test) (-f) | /tmp/archive.tar.gz; | (then) → archive 파일이 있으면

mv /tmp/archive.tar.gz   /tmp/archive.tar.gz.OLD → 원본 유지 snapshot

tar acf   "   dest   /etc/apt
                        source
(else)

"

init system → timer service, etc ...

systemctl cat ssh.service
⋮
ExecReload : command to reload the configuration for the ssh daemon
Restart =: on-failure

lifecycle of ssh daemon

if we want to modify settings :

sudo systemctl edit --full ssh.service

or, if revert it

sudo systemctl revert ssh.service

status
    └ 1. enabled = automatically start up ⟷ disable

2. Active: active (running) or active (exited)   but it still can manually started
              └ on memory

3. Main PID :
         └ process id

sudo systemctl stop _____

start

restart = maybe disrupted

reload = gracefully reload, but not every app supports
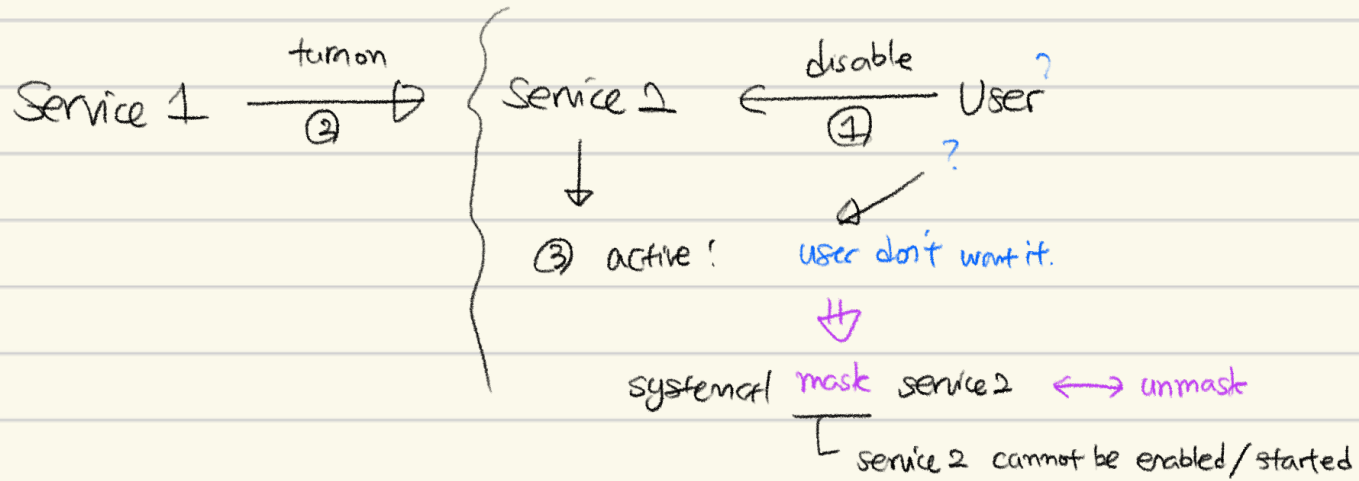
reload-or-restart = try reload first.

disable

is-enabled = status check

enable = automatically start service next boot (not now)
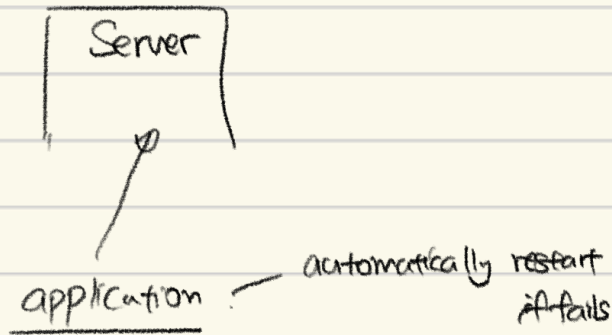
start = start now (not next time)

enable -- now

disable -- now

Service 1 $\xrightarrow[\text{②}]{\text{turn on}}$ ⊳ { Service 2 $\xleftarrow[\text{①}]{\text{disable}}$ User ?

Service 2 ↓

③ active !   user don't want it. ?

⇩

systemctl **mask** service2 ⟷ **unmask**

└ service 2 cannot be enabled / started

Q1. Want to see every systemd service!

= sudo systemctl list-units (--type service --all)

Server

application : → automatically restart
                    if fails

/lib/systemd/system ←

locate
            ↗ Exec Step
[/// /] + [command]

Practice   utility, receiver msg, log

1. echo "MyApp Started" | (systemd-cat) -t MyApp -p info
                                                    identifier   sees file priority

    sleep 5   wait 5 second

        "Crashed" | "   err

But how to make it systemd?
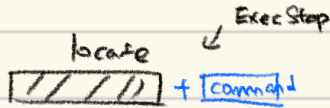
```
[Unit]
Description=OpenBSD Secure Shell server
Documentation=man:sshd(8) man:sshd_config(5)   →  man
After=network.target auditd.service   → dependency
ConditionPathExists=!/etc/ssh/sshd_not_to_be_run

[Service]
EnvironmentFile=-/etc/default/ssh
ExecStartPre=/usr/sbin/sshd -t
ExecStart=/usr/sbin/sshd -D $SSHD_OPTS    /usr/local .... sh
ExecReload=/usr/sbin/sshd -t
ExecReload=/bin/kill -HUP $MAINPID
KillMode=process
Restart=on-failure
RestartPreventExitStatus=255
Type=notify
RuntimeDirectory=sshd
RuntimeDirectoryMode=0755

[Install]
WantedBy=multi-user.target
Alias=sshd.service
```

→ if this file exists, it doesn't run

KillMode=process = only parent not child. when stop command
Restart= always
RestartPreventExitStatus=255   Restart Sec = 1
Type= simple

WantedBy=multi-user.target = this service belongs to the [multi-user.target | + X]
                                                        = graphical. target (GUI)

LAB.

1. sudo shutdown +120
2. sudo systemctl set-default graphical.target
3. sudo shutdown -c
4. tar acf archive.tar.gz dir1
   systemctl status
           is-enabled
           mask
           unmask