raspberry-pi, gk

## Raspberry Read-Only

**Page en construction**

### Objectif

Apporter des modifications à la distribution Raspbian pour une utilisation sans écritures sur la carte SD et permettre une extinction brutale de la machine sans risque de détériorer le système de fichiers

### Limitation

Utilisation de la version Raspbian/Buster, version stable à ce jour (déc 2019). L'image installée à la base est la version **lite** pour limiter les logiciels installés.

### lectures

https://the.mad-tinkerer.me/raspberry-pi/read-only-root-filesystem-debian-buster/

https://medium.com/@andreas.schallwig/how-to-make-your-raspberry-pi-file-system-read-only-raspbian-stretch-80c0f7be7353

https://k3a.me/how-to-make-raspberrypi-truly-read-only-reliable-and-trouble-free/

http://blog.gegg.us/2014/03/a-raspbian-read-only-root-fs-howto/

https://github.com/JasperE84/root-ro

https://www.a-netz.de/blog/2013/02/read-only-root-filesystem/

https://the.mad-tinkerer.me/raspberry-pi/read-only-root-filesystem-debian-buster/

### Buster read-only

```
sudo apt update
sudo apt upgrade
sudo apt dist-upgrade
sudo apt install python3
sudo apt install puredata
sudo apt install pd-osc pd-mrpeach pd-iemlib
sudo apt install lsof
lsof / | awk 'NR==1 || $4~/[0-9]+[uw]/'
sudo systemctl disable apt-daily.timer apt-daily-upgrade.timer man-db.timer
sudo systemctl mask systemd-tmpfiles-setup apt-daily apt-daily-upgrade systemd-tmpfiles-clean systemd-tmpfiles-clean.timer systemd-update-utmp systemd-update-utmp-runlevel systemd-rfkill systemd-rfkill.socket systemd-logind.service man-db.service
systemd-update-utmp-runlevel systemd-rfkill systemd-rfkill.socket systemd-logind.service man-db.service
sudo systemctl disable dphys-swapfile
sudo apt clean
```

Modifier /etc/fstab

modifier en ro /boot et /

```
PARTUUID=6c586e13-01  /boot           vfat    defaults,ro          0 2
PARTUUID=6c586e13-02  /               ext4    defaults,ro,noatime  0 1
```

ajouter

```
none                  /tmp              tmpfs   size=128M,mode=01777                  0 0
none                  /var/tmp          tmpfs   size=16M                              0 0
none                  /var/log          tmpfs   size=16M,mode=0755                    0 0
```

```
none                /var/lib/logrotate tmpfs  size=1M                                0 0
```

sudo reboot et vérifier les services en erreur

```
systemctl list-units --state=failed
```

### Changement de mode

#### Autoriser l'écriture

```
sudo mount / -o remount,rw
sudo mount /boot -o remount,rw
```

#### Retourner en mode read-only

```
sudo mount / -o remount,ro -f
sudo mount /boot -o remount,ro -f
```

Ajouter à /etc/bash.bashrc **source** : https://hallard.me/raspberry-pi-read-only/

```
# set variable identifying the filesystem you work in (used in the prompt below)
set_bash_prompt(){
    fs_mode=$(mount | sed -n -e "s/^\/dev\/.* on \/ .*(\(r[w|o]\).*/\1/p")
    PS1='\[\033[01;32m\]\u@\h${fs_mode:+($fs_mode)}\[\033[00m\]:\[\033[01;34m\]\w\[\033[00m\]\$ '
}

alias ro='sudo mount -o remount,ro / ; sudo mount -o remount,ro /boot'
alias rw='sudo mount -o remount,rw / ; sudo mount -o remount,rw /boot'

# setup fancy prompt"
PROMPT_COMMAND=set_bash_prompt
```

### Compléments

#### Logrotate

modifier /etc/cron.daily/logrotate

```
#/usr/sbin/logrotate /etc/logrotate.conf
/usr/sbin/logrotate --state /var/log/logrotate.state /etc/logrotate.conf
```

#### lightdm

modifier /etc/lightdm.conf

```
cache-directory=/var/tmp/lightdm
```

Article extrait de : http://www.lesporteslogiques.net/wiki/ - **WIKI Les Portes Logiques**
Adresse : **http://www.lesporteslogiques.net/wiki/openatelier/projet/raspberry_read-only**
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