Linux

- Chiffrement Luks
- Scripts Linux utiles
- Wi-Fi
- Network Manager
- Tmux
- Gluster
- Crowdsec
- ZSH
- Wireguard
- Debian
- firewalld
- vim
- Screen
- MySQL - MariaDB
- Hardened ssh
- Arch Linux

Chiffrement Luks

Chiffrer une partition

```
#sudo cryptsetup -y -v luksFormat /dev/sdc1
ATTENTION: Le périphérique /dev/sdc1 contient déjà une signature pour un superblock « crypto_LUKS ».

WARNING!
========
Cette action écrasera définitivement les données sur /dev/sdc1.

Are you sure? (Type uppercase yes): YES
Saisissez la phrase secrète pour /dev/sdc1 :
Vérifiez la phrase secrète :
```

Formater la partition

```
#sudo mkfs.ntfs -f /dev/mapper/Samsung
Cluster size has been automatically set to 4096 bytes.
Creating NTFS volume structures.
mkntfs completed successfully. Have a nice day.
```

Lister les blocs et identifier les blocs luks

```
#lsblk --fs

NAME                                  FSTYPE      LABEL UUID                                   FSAVAIL FSUSE% MOUNTPOINT
sda
├─sda1                                vfat            6FE5-9D8C                              163,2M    18% /boot/efi
├─sda2                                ext4            f56409e9-43af-41d4-bf9e-1b3ce3cb11e0    713,9M    20% /boot
└─sda3                                crypto_LUKS     6eb090b6-7304-4843-b357-857c5d92962e
  └─luks-6eb090b6-7304-4843-b357-857c5d92962e LVM2_member       pMkBCr-iN2G-XsPH-4ECF-0zhc-M8uA-wrdQ
    ├─fedora-root                     ext4            d53e789d-3b19-4314-8fd8-6536e094740d      25G    44% /
    ├─fedora-swap                     swap            d4261e47-edb0-4abc-9131-cf8dbc751c7e                [SWAP]
    └─fedora-home                     ext4            5acd1096-bbde-404f-9122-bec03451397d    146,4G    59% /hom
sdc
└─sdc1                                crypto_LUKS     bd80f01b-bfd0-4bc6-a2bb-bc0a25935ccb
```

Saisir la clef de déchiffrement du disque

```
#sudo cryptsetup luksOpen /dev/sdc1 Samsung
Saisissez la phrase secrète pour /dev/sdc1 :
```

Oublier la clef de chiffrement du disque

```
#sudo cryptsetup luksClose Samsung
```

Dump de l'entête

```
sudo cryptsetup luksDump /dev/sdc1                  SIGINT(2) ↵  10396  15:57:10
LUKS header information
Version:        2
Epoch:          3
Metadata area: 16384 [bytes]
Keyslots area: 16744448 [bytes]
UUID:           f2c5df1a-a6cb-46d9-a5b9-50c233089cc2
Label:          (no label)
Subsystem:      (no subsystem)
Flags:          (no flags)

Data segments:
  0: crypt
        offset: 16777216 [bytes]
        length: (whole device)
        cipher: aes-xts-plain64
        sector: 512 [bytes]

Keyslots:
  0: luks2
        Key:        512 bits
        Priority:   normal
        Cipher:     aes-xts-plain64
        Cipher key: 512 bits
        PBKDF:      argon2i
        Time cost:  6
        Memory:     1048576
        Threads:    4
        Salt:       6c 79 ac 83 62 0b b4 27 8a 51 6f 07 c7 51 ae 48
                    d2 8b 70 88 c0 2a f2 a8 81 2b 9f 5f 05 21 ee 00
        AF stripes: 4000
        AF hash:    sha256
        Area offset:32768 [bytes]
        Area length:258048 [bytes]
        Digest ID:  0
Tokens:
Digests:
  0: pbkdf2
        Hash:       sha256
```

	Iterations: 115380
	Salt: d5 23 f6 2a 06 ea 92 19 45 12 2a 54 d7 a5 2c ee
	 ae 64 f9 2c 85 34 d5 2f a1 3e 71 21 c1 1c e2 07
	Digest: c1 7b 22 74 2e c7 54 6f 73 39 77 2a 1e 5f 67 65
	 54 80 07 43 d3 3d a0 08 d4 f0 b8 6f 76 be 44 70

Ajouter une clef

On ajoute une clef supplémentaire en slot 2 sur la base d'un mot de passe

```
sudo cryptsetup luksAddKey --key-slot 1 /dev/sdc1
Entrez une phrase secrète existante :
Entrez une nouvelle phrase secrète pour l'emplacement de clé :
Vérifiez la phrase secrète :
```

Ou sur la base d'un fichier qui fait office de clef (cette méthode est préférable afin de rendre la chose plus robuste et automatisé pour le montage) :

```
dd if=/dev/urandom of=/home/dugravot6/Securite/Samsung_disk_secret_key bs=512 count=8
sudo cryptsetup -v luksAddKey /dev/sdc1 /home/dugravot6/Securite/Samsung_disk_secret_key
```

Le dump présentera le slot2 occupé :

```
LUKS header information
Version:       	2
Epoch:         	4
Metadata area: 	16384 [bytes]
Keyslots area: 	16744448 [bytes]
UUID:          	f2c5df1a-a6cb-46d9-a5b9-50c233089cc2
Label:         	(no label)
Subsystem:     	(no subsystem)
Flags:       	(no flags)

Data segments:
  0: crypt
	offset: 16777216 [bytes]
	length: (whole device)
	cipher: aes-xts-plain64
	sector: 512 [bytes]

Keyslots:
  0: luks2
	Key:        512 bits
	Priority:   normal
	Cipher:     aes-xts-plain64
	Cipher key: 512 bits
	PBKDF:      argon2i
	Time cost:  6
	Memory:     1048576
```

```
	Threads:    4
	Salt:       6c 79 ac 83 62 0b b4 27 8a 51 6f 07 c7 51 ae 48
	            d2 8b 70 88 c0 2a f2 a8 81 2b 9f 5f 05 21 ee 00
	AF stripes: 4000
	AF hash:    sha256
	Area offset:32768 [bytes]
	Area length:258048 [bytes]
	Digest ID:  0
  1: luks2
	Key:        512 bits
	Priority:   normal
	Cipher:     aes-xts-plain64
	Cipher key: 512 bits
	PBKDF:      argon2i
	Time cost:  4
	Memory:     1020932
	Threads:    4
	Salt:       6d 0f 29 10 c8 5b 9a e3 58 30 f4 3e 8e 8f 2d 60
	            0b f8 17 5f 18 fa dd 42 9c fe 38 d7 07 7d 2c d4
	AF stripes: 4000
	AF hash:    sha256
	Area offset:290816 [bytes]
	Area length:258048 [bytes]
	Digest ID:  0
Tokens:
Digests:
  0: pbkdf2
	Hash:       sha256
	Iterations: 115380
	Salt:       d5 23 f6 2a 06 ea 92 19 45 12 2a 54 d7 a5 2c ee
	            ae 64 f9 2c 85 34 d5 2f a1 3e 71 21 c1 1c e2 07
	Digest:     c1 7b 22 74 2e c7 54 6f 73 39 77 2a 1e 5f 67 65
	            54 80 07 43 d3 3d a0 08 d4 f0 b8 6f 76 be 44 70
```

Supprimer une clef

On précise le slot a supprimer :

```
sudo cryptsetup luksKillSlot /dev/sdc1 1
Entrez toute phrase secrète restante :
```

Monter automatiquement la partition

Le fichier `/etc/crypttab` permet de définir les entrées et les options de montage :

```
Samsung UUID=5ab227f5-f69e-4a2f-b85a-32b7637d42be /home/dugravot6/Securite/Samsung_disk_secret_key luk
```

Le format est le suivant :

```
<target name> <source device> <key file> <options>
```

Ici, l'UUID correspondant sera monté grace à la clef (/home/dugravot6/Securite/Samsung_disk_secret_key) que l'on a associée précédemment en slot 2.

Scripts Linux utiles

Scripts Linux utiles

Usage mémoire/swap

Utilisation du swap par processus

```
for file in /proc/*/status ;
do awk '/Tgid|VmSwap|Name/{printf $2 " " $3}END{ print ""}' $file;
done | grep kB  | sort -k 3 -n
```

Utilisation de la mémoire totale par processus

```
for file in /proc/*/status ;
do awk '/Tgid|VmSize|Name/{printf $2 " " $3}END{ print ""}' $file;
done | grep kB  | sort -k 3 -n
```

A noter :

- what do the fields VmSize, VmLck, VmRSS, VmData, VmStk, VmExe, and VmLib mean?

Wait

Processus

Identifier les processus qui provoquent du wait

```
while true; do date; ps auxf | awk '{if($8=="D") print $0;}'; sleep 1; done
```

Wait disques

Wait Proc

Informations sur le processus

```
lsof -p PID
```

Conditions shell

Existance du fichier logwatch ?

```
[ -e logwatch ] && echo "ok"
```

Wi-Fi

Afficher les réseaux Wi-Fi et leur signal

```
nmcli dev wifi list
IN-USE  BSSID           SSID          MODE   CHAN  RATE     SIGNAL  BARS  SECURITY
        8C:97:EA:D9:E6:08  Freebox-32127D  Infra  11    130 Mb/s  100     ▂▄▆█  WPA2
*       8C:97:EA:D9:E6:0C  Freebox-32127D  Infra  104   540 Mb/s  100     ▂▄▆█  WPA2
        B4:E2:65:B1:B8:6D  SFR_B86B       Infra  6     260 Mb/s  44      ▂▄__  WPA1 WPA2
        2C:08:23:2B:D8:EE  Livebox-D8EE   Infra  1     195 Mb/s  30      ▂___  WPA2
        B4:E2:65:B1:B8:6E  SFR_B86B       Infra  52    540 Mb/s  27      ▂___  WPA1 WPA2
        08:87:C6:62:A8:80  Livebox-A880   Infra  1     195 Mb/s  24      ▂___  WPA2
```

Network Manager

Création d'une connexion

```
nmcli connection add type ethernet con-name esn19 ifname ens19
```

> Après l'ajout d'une interface depuis proxmox, NetworkManager ne prenait pas en compte cette interface. Il a fallu la créer ...

Tmux

FAQ

Copier/coller le buffer

```
CTRL B
capture-pane -S -20000

CTRL B
save-buffer /tmp/buf.txt
```

Ecrire dans plusieurs terminaux en même temps

```
Ctrl-B :
setw synchronize-panes on
clear history
```

Redimensionner un pane

```
:resize-pane -D (Resizes the current pane down by one cell)

:resize-pane -R (Resizes the current pane right by one cell)

:resize-pane -U (Resizes the current pane upward by one cell)

:resize-pane -L (Resizes the current pane left by one cell)

:resize-pane -U 10 (Resizes the current pane upward by ten cells)

:resize-pane -R 10 (Resizes the current pane right by ten cells)

:resize-pane -D 10 (Resizes the current pane down by ten cells)

:resize-pane -L 10 (Resizes the current pane left by ten cells)
```

If you wish to configure your keybindings, then open the tmux.conf file and append the following lines of code:

```
bind -n M-H resize-pane -L 2

bind -n M-L resize-pane -R 2

bind -n M-K resize-pane -U 2

bind -n M-J resize-pane -D 2
```

Faire une recherche dans un panel

```
setw -g mode-keys vi
bind-key -n C-f copy-mode \; send-key ?
```

Alors on fait CTRL-F, puis le pattern.

N permet de passer au suivant, SHIFT N au précédent.

Copier/Coller

En mode clavier

```
# Entrer en mode copie
CTRL+B [

# Débuter la sélection
SPACE

# Fin de sélection
ENTRER

# Coller
CTRL+B ]
```

En mode souris

1. Nécessite xclip

2. Sélection par la souris, appuyer sur ENTRER pour copier

```
set -g mouse on
bind -n WheelUpPane if-shell -F -t = "#{mouse_any_flag}" "send-keys -M" "if -Ft= '#{pane_in_mode}' 'send-keys -M' 'select-pane -t=; copy-mode -e; send-keys -M'"
bind -n WheelDownPane select-pane -t= \; send-keys -M
bind -n C-WheelUpPane select-pane -t= \; copy-mode -e \; send-keys -M
bind -T copy-mode-vi    C-WheelUpPane   send-keys -X halfpage-up
bind -T copy-mode-vi    C-WheelDownPane send-keys -X halfpage-down
bind -T copy-mode-emacs C-WheelUpPane   send-keys -X halfpage-up
bind -T copy-mode-emacs C-WheelDownPane send-keys -X halfpage-down

# To copy, left click and drag to highlight text in yellow,
# once you release left click yellow text will disappear and will automatically be available in clibboard
# # Use vim keybindings in copy mode
setw -g mode-keys vi
# Update default binding of `Enter` to also use copy-pipe
unbind -T copy-mode-vi Enter
bind-key -T copy-mode-vi Enter send-keys -X copy-pipe-and-cancel "xclip -selection c"
bind-key -T copy-mode-vi MouseDragEnd1Pane send-keys -X copy-pipe-and-cancel "xclip -in -selection clipboard"
```

Gluster

Configuration

```
gluster volume set v0 network.ping-timeout 5
```

Faut il ? :

```
sudo gluster volume set v0 cluster.server-quorum-type server
```

Commandes utiles

Options du volume

```
sudo gluster volume get  v0 all
```

```
# sudo gluster volume status v0
detail
                                    dugravot6@minipc1 ↥ 21:10:03
Status of volume: gv0
------------------------------------------------------------------------------
Brick                : Brick minipc1:/data/brick1/v0
TCP Port             : 49153
RDMA Port            : 0
Online               : Y
Pid                  : 91087
File System          : xfs
Device               : /dev/mapper/minipc1--vg-brick1
Mount Options        : rw,relatime,attr2,inode64,logbufs=8,logbsize=32k,noquota
Inode Size           : 512
Disk Space Free      : 9.4GB
Total Disk Space     : 10.0GB
```

```
Inode Count          : 5242880
Free Inodes          : 5170060
--------------------------------------------------------------------------------
Brick                : Brick minipc2:/data/brick1/v0
TCP Port             : 49152
RDMA Port            : 0
Online               : Y
Pid                  : 865
File System          : xfs
Device               : /dev/mapper/minipc2--vg-brick1
Mount Options        : rw,relatime,attr2,inode64,logbufs=8,logbsize=32k,noquota
Inode Size           : 512
Disk Space Free      : 9.4GB
Total Disk Space     : 10.0GB
Inode Count          : 5242880
Free Inodes          : 5170060
--------------------------------------------------------------------------------
Brick                : Brick pi1:/data/brick1/v0
TCP Port             : 49152
RDMA Port            : 0
Online               : Y
Pid                  : 1089
File System          : ext4
Device               : /dev/root
Mount Options        : rw,noatime
Inode Size           : N/A
Disk Space Free      : 53.4GB
Total Disk Space     : 58.2GB
Inode Count          : 3852672
Free Inodes          : 3644730
```

```
sudo gluster volume status
v0
                                    dugravot6@minipc1 ↥ 21:06:48
Status of volume: gv0
Gluster process                         TCP Port  RDMA Port  Online  Pid
------------------------------------------------------------------------------
Brick minipc1:/data/brick1/gv0          49153     0          Y       91087
Brick minipc2:/data/brick1/gv0          49152     0          Y       865
Brick pi1:/data/brick1/gv0              49152     0          Y       1089
```

```
Self-heal Daemon on localhost               N/A       N/A       Y       91110
Self-heal Daemon on minipc2                 N/A       N/A       Y       876
Self-heal Daemon on pi1                     N/A       N/A       Y       1188

Task Status of Volume gv0
------------------------------------------------------------------------------
There are no active volume tasks
```

```
 sudo gluster volume status v0
clients
                                    dugravot6@minipc1 ↥ 21:08:53
Client connections for volume gv0
------------------------------------------------
Brick : minipc1:/data/brick1/gv0
Clients connected : 2
Hostname                                  BytesRead    BytesWritten      OpVersion
--------                                  ---------    ------------      ---------
127.0.0.1:49145                              4940         5344         90000
127.0.0.1:49144                            121252        107068         90000
------------------------------------------------
Brick : minipc2:/data/brick1/gv0
Clients connected : 7
Hostname                                  BytesRead    BytesWritten      OpVersion
--------                                  ---------    ------------      ---------
192.168.1.142:49136                          2024         1596         90000
192.168.1.133:49140                          3072         2956         90000
192.168.1.133:49138                       2662750        11976         90000
192.168.1.141:49144                      60717900      46588484         90000
192.168.1.142:49134                         17660        19124         90000
192.168.1.141:49147                          1688         1792         90000
192.168.1.141:49141                        121308        107068         90000
------------------------------------------------
Brick : pi1:/data/brick1/gv0
Clients connected : 7
Hostname                                  BytesRead    BytesWritten      OpVersion
--------                                  ---------    ------------      ---------
192.168.1.141:49142                      69540850      59101132         90000
192.168.1.133:49142                         75000        59132         90000
192.168.1.133:49139                          8980         8420         90000
```

```
192.168.1.142:49145                     3424         3208         90000
192.168.1.142:49139                     7316         6508         90000
192.168.1.141:49146                     1684         1784         90000
192.168.1.141:49140                   100176        86464         90000
------------------------------------------------
```

Volume top

Lecture de fichiers :

```
# sudo gluster volume top v0 read list-cnt 10                                dugravot6@minipc1 ↥ 16:50:13
Brick: minipc1:/data/brick1/volume1
Count          filename
=======================
62285          /UPTIME-KUMA/datas/kuma.db
23020          /UPTIME-KUMA/datas/kuma.db-wal
2290           /JELLYFIN/config/data/library.db
1987           /JELLYFIN/config/data/library.db-journal
725            /PORTAINER/datas/portainer.db
431            /JDOWNLOADER2/data/config/Core.jar
405            /JDOWNLOADER2/data/config/JDownloader.jar
310            /FRESHRSS/prod/data/varlibmysql/rss/dugravot6_entry.ibd
289            /FRESHRSS/prod/data/varlibmysql/ibdata1
286            /BOOKSTACK/db/config/databases/ibdata1
Brick: minipc2:/data/brick1/volume1
```

Ouverture de fichiers :

```
# sudo gluster volume top v0 open list-cnt
10
                    dugravot6@minipc1 ↥ 16:51:27
Brick: minipc1:/data/brick1/volume1
Current open fds: 196, Max open fds: 198, Max openfd time: 2023-03-17 15:36:30.422556 +0000
Count          filename
=======================
200            /NGINX/data/acme/acme.sh/stephane@dugravot.fr/whoami.local/whoami.local.conf
109            /NGINX/data/acme/acme.sh/stephane@dugravot.fr/http.header
66             /NGINX/data/acme/acme.sh/stephane@dugravot.fr/account.conf
24             /NGINX/data/acme/acme.sh/stephane@dugravot.fr/whoami.local/whoami.local.key
```

```
24              /NGINX/data/acme/acme.sh/stephane@dugravot.fr/whoami.local/whoami.local.csr.conf
11              /FRESHRSS/prod/data/freshrss/users/dugravot6/log.txt
8               /NGINX/data/acme/acme.sh/stephane@dugravot.fr/whoami.local/whoami.local.csr
7               /NGINX/data/certs/wiki.dugravot.fr/.companion
7               /FRESHRSS/prod/data/varlibmysql/mysql/plugin.MAI
7               /FRESHRSS/prod/data/varlibmysql/mysql/plugin.MAD
Brick: minipc2:/data/brick1/volume1
Current open fds: 196, Max open fds: 197, Max openfd time: 2023-03-17 16:06:54.886386 +0000
Count           filename
=======================
25              <gfid:34f34f23-979e-46d6-b39c-
8c224b444058>/stephane@dugravot.fr/whoami.local/whoami.local.conf
17              <gfid:34f34f23-979e-46d6-b39c-8c224b444058>/stephane@dugravot.fr/http.header
12              <gfid:34f34f23-979e-46d6-b39c-8c224b444058>/stephane@dugravot.fr/account.conf
4               /JDOWNLOADER2/data/config/JDownloader.jar
4               /JDOWNLOADER2/data/config/xdg/cache/fontconfig/5ca8086aeacc9c68e81a71e7ef846b3b-
le64.cache-8
4               /JDOWNLOADER2/data/config/xdg/cache/fontconfig/386ad34c5eaeb46f7db63aa04756d58d-
le64.cache-8
4               /JDOWNLOADER2/data/config/xdg/cache/fontconfig/605eb33399efa08596766eba8c7361d5-
le64.cache-8
3               <gfid:34f34f23-979e-46d6-b39c-
8c224b444058>/stephane@dugravot.fr/whoami.local/whoami.local.key
3               <gfid:34f34f23-979e-46d6-b39c-
8c224b444058>/stephane@dugravot.fr/whoami.local/whoami.local.csr.conf
3               /JDOWNLOADER2/data/config/xdg/cache/fontconfig/a1c95d6dfc9a7b34f44445cf81166004-le64.cache-
8
```

Performance en lecture (possible en écriture)

```
# sudo gluster volume top v0 read-perf bs 256 count 1 brick minipc1:/data/brick1/volume1 list-cnt
10
dugravot6@minipc1 ↥ 16:57:52
Brick: minipc1:/data/brick1/volume1
Throughput 36.57 MBps time 0.0000 secs
MBps Filename                                 Time
==== ========                                 ====
2878 ...ipJBinding-732PU0OuPPzj/lib7-Zip-JBinding.so 2023-03-17 15:05:24 +0000.978307
2732 /JDOWNLOADER2/data/config/Core.jar             2023-03-17 15:04:56 +0000.519398
```

```
2528 ...2/data/config/libs/sevenzipjbindingLinux.jar 2023-03-17 15:05:24 +0000.367497
2441 /JDOWNLOADER2/data/config/tmp/hosterCache       2023-03-17 15:05:13 +0000.976603
2399 /JDOWNLOADER2/data/config/JDownloader.jar       2023-03-17 15:04:53 +0000.983716
2351 ...e815af0366dca31c28ab149bd8ed75c/backdrop.jpg 2023-03-17 15:06:58 +0000.85402
2234 .../1/10f6ec15-e9be-b988-b6d9-00dcc1ef3674.webp 2023-03-17 15:03:39 +0000.352235
2053 .../9/91ed9e05-232e-9cf5-ef55-2babb3281509.webp 2023-03-17 15:03:36 +0000.184495
1947 ...NLOADER2/data/config/libs/bcprov-jdk15on.jar 2023-03-17 15:38:36 +0000.239210
1942 .../1bf37a0f85b7c9fed7ce54b4952dcb31/poster.jpg 2023-03-17 15:06:42 +0000.912953
```

Informations de profile

Activer le profiling

```
sudo gluster volume profile v0 start
```

Visualiser les résultats

```
 sudo gluster volume profile v0
info
        1m 36s dugravot6@minipc1 ↥ 16:16:09
Brick: minipc1:/data/brick1/volume1
----------------------------------
Cumulative Stats:
   Block Size:              1b+             2b+             4b+
 No. of Reads:              0               1               0
No. of Writes:              74              10              185

   Block Size:              8b+             16b+            32b+
 No. of Reads:              5               2               1
No. of Writes:              1414            1957            298

   Block Size:              64b+            128b+           256b+
 No. of Reads:              34              97              16
No. of Writes:              415             847             970

   Block Size:              512b+           1024b+          2048b+
 No. of Reads:              1361            21              58
No. of Writes:              2518            1495            1862
```

Block Size:	4096b+	8192b+	16384b+
No. of Reads:	45583	20217	6635
No. of Writes:	11409	3159	4280

Block Size:	32768b+	65536b+	131072b+
No. of Reads:	1196	1765	2063
No. of Writes:	2065	2354	11300

Block Size:	262144b+	524288b+	1048576b+
No. of Reads:	1	3	106
No. of Writes:	0	0	0

%-latency	Avg-latency	Min-Latency	Max-Latency	No. of calls	Fop
0.00	0.00 us	0.00 us	0.00 us	141	FORGET
0.00	0.00 us	0.00 us	0.00 us	15862	RELEASE
0.00	0.00 us	0.00 us	0.00 us	38985	RELEASEDIR
0.00	33.90 us	33.90 us	33.90 us	1	FSYNCDIR
0.00	134.57 us	134.57 us	134.57 us	1	FALLOCATE
0.01	153.39 us	123.50 us	172.33 us	5	RMDIR
0.01	149.02 us	25.24 us	280.28 us	8	READDIR
0.02	256.76 us	204.28 us	329.66 us	6	MKDIR
0.02	127.72 us	63.05 us	220.73 us	15	TRUNCATE
0.02	153.44 us	101.80 us	278.24 us	15	RENAME
0.03	42.87 us	25.44 us	103.08 us	60	READLINK
0.04	135.90 us	67.24 us	296.09 us	30	XATTROP
0.04	81.48 us	15.06 us	216.84 us	51	GETXATTR
0.07	1465.94 us	128.16 us	2210.86 us	5	LINK
0.10	84.19 us	38.87 us	253.69 us	124	OPEN
0.15	37.55 us	11.16 us	299.45 us	400	FLUSH
0.17	162.50 us	92.04 us	858.68 us	103	UNLINK
0.26	48.99 us	15.22 us	2688.13 us	526	ENTRYLK
0.26	236.51 us	156.67 us	573.31 us	109	CREATE
0.26	90.69 us	32.79 us	229.81 us	291	STAT
0.37	189.38 us	86.62 us	467.67 us	196	FTRUNCATE
0.60	66.45 us	19.45 us	161.94 us	899	STATFS
0.93	70.56 us	15.45 us	1843.70 us	1321	FINODELK
2.00	152.13 us	53.12 us	5272.62 us	1321	FXATTROP
2.09	76.37 us	27.49 us	1195.45 us	2741	FSTAT
2.40	69.62 us	15.50 us	367.28 us	3465	LK

```
      4.51      53.58 us      13.81 us    3403.97 us         8451        READ
      4.75      52.41 us       1.70 us    4025.41 us         9090     OPENDIR
      4.80     143.98 us      35.47 us    5199.62 us         3347       WRITE
      4.81      57.25 us      17.02 us    3235.78 us         8432     INODELK
      5.06     120.90 us      53.51 us    4871.59 us         4201     SETATTR
     18.01     141.41 us      22.43 us    3800.04 us        12778      LOOKUP
     23.92     128.27 us      16.64 us    2681.28 us        18711    READDIRP
     24.30    2518.68 us     142.53 us   18229.04 us          968       FSYNC

    Duration: 9943 seconds
   Data Read: 1074532509 bytes
Data Written: 1979205900 bytes
```

Stopper le profiling

```
sudo gluster volume profile v0 stop
```

Crowdsec

Installation

- https://docs.crowdsec.net/docs/getting_started/install_crowdsec/

Accès à la console

- https://app.crowdsec.net/

Commandes utiles

Lister les décisions locales

```
cscli decisions
list
      Wed Apr  5 15:28:48 2023


+----+----------+-----------------------------------------+-----------------------------------+--------+---------
+-------------------------------------------------+--------+------------------+----------+
| ID |  Source  |              Scope:Value                |              Reason               | Action | Country |
AS                      | Events |     expiration     | Alert ID |
+----+----------+-----------------------------------------+-----------------------------------+--------+---------
+-------------------------------------------------+--------+------------------+----------+
| 18 | crowdsec | Ip:2a01:cb00:8906:7e00:5401:1966:20ac:69ad | crowdsecurity/http-crawl-non_statics | ban    |
FR      | 3215 Orange                             | 89     | 3h59m43.090461234s | 18       |
| 17 | crowdsec | Ip:92.175.107.123                       | crowdsecurity/http-crawl-non_statics | ban    | FR      | 3215
Orange                                  | 49     | 3h59m13.25235483s  | 17       |
| 16 | crowdsec | Ip:79.81.205.138                        | crowdsecurity/http-crawl-non_statics | ban    | FR      | 15557
Societe Francaise Du Radiotelephone - SFR SA | 66     | 3h54m44.194349115s | 16       |
| 15 | crowdsec | Ip:212.23.165.14                        | crowdsecurity/http-crawl-non_statics | ban    | FR      | 12566
Societe Francaise Du Radiotelephone - SFR SA | 46     | 3h52m52.665948387s | 15       |
```

```
| 14 | crowdsec | Ip:83.206.19.140                         | crowdsecurity/http-crawl-non_statics | ban    | FR      | 3215
Orange                                   | 43     | 3h52m47.901151072s | 14       |
| 13 | crowdsec | Ip:84.55.185.70                          | crowdsecurity/http-crawl-non_statics | ban    | FR      | 9003
Societe Francaise Du Radiotelephone - SFR SA  | 42     | 3h51m2.636570684s  | 13       |
| 12 | crowdsec | Ip:194.254.79.4                          | crowdsecurity/http-xss-probbing      | ban    | FR      | 2200
Renater                                  | 6      | 3h49m7.676288661s  | 12       |
| 4  | crowdsec | Ip:2a01:cb11:6a0:2d00:bfe7:82c4:c724:9eb7  | crowdsecurity/http-crawl-non_statics | ban    |
FR      | 3215 Orange                              | 91     | 3h46m13.472584547s | 4        |
| 3  | crowdsec | Ip:176.168.162.101                       | crowdsecurity/http-crawl-non_statics | ban    | FR      | 5410
Bouygues Telecom SA                      | 46     | 3h45m27.591191061s | 3        |
| 2  | crowdsec | Ip:2001:41d0:302:1000::ca9               | crowdsecurity/http-crawl-non_statics | ban    | GB      |
16276 OVH SAS                            | 47     | 3h43m25.263040245s | 2        |
| 1  | crowdsec | Ip:134.158.79.158                        | crowdsecurity/http-crawl-non_statics | ban    | FR      | 789
Renater                                  | 45     | 3h41m26.974324678s | 1        |
+----+----------+------------------------------------------+--------------------------------------+--------+---------
+-------------------------------------------------+--------+--------------------+----------+
7 duplicated entries skipped
```

Lister les alertes

```
cscli alerts list
╭────┬──────────────────────────────────────────┬──────────────────────────────────────────┬
──────────┬──────────────────────────────────────────────┬──────────┬─────────────────
─────────────────────╮
│ ID │                 value                    │               reason                     │ country │                   as                  │
decisions │             created_at               │
├────┼──────────────────────────────────────────┼──────────────────────────────────────────┼
──────────┼──────────────────────────────────────────────┼──────────┼─────────────────
─────────────────────┤
│ 15 │ Ip:212.23.165.14                         │ crowdsecurity/http-crawl-non_statics       │ FR      │ 12566 Societe
Francaise Du Radiotelephone - SFR SA │ ban:1      │ 2023-04-05 13:21:28.67736235 +0000 UTC  │
│ 14 │ Ip:83.206.19.140                         │ crowdsecurity/http-crawl-non_statics       │ FR      │ 3215
Orange                                   │ ban:1      │ 2023-04-05 13:21:35.442813467 +0000 UTC │
│ 13 │ Ip:84.55.185.70                          │ crowdsecurity/http-crawl-non_statics       │ FR      │ 9003 Societe
Francaise Du Radiotelephone - SFR SA  │ ban:1      │ 2023-04-05 13:19:50.40175296 +0000 UTC  │
│ 12 │ Ip:194.254.79.4                          │ crowdsecurity/http-xss-probbing            │ FR      │ 2200
Renater                                  │ ban:1      │ 2023-04-05 13:17:56.216060733 +0000 UTC │
│ 11 │ Ip:194.254.79.4                          │ crowdsecurity/http-cve-2021-41773          │ FR      │ 2200
Renater                                  │ ban:1      │ 2023-04-05 13:17:55.755095951 +0000 UTC │
│ 10 │ Ip:194.254.79.4                          │ crowdsecurity/http-path-traversal-probing │ FR      │ 2200
```

```
Renater                              │ ban:1     │ 2023-04-05 13:17:54.292927884 +0000 UTC │
│ 9  │ Ip:194.254.79.4                      │ crowdsecurity/http-sensitive-files        │ FR       │ 2200
Renater                              │ ban:1     │ 2023-04-05 13:17:52.403785142 +0000 UTC │
│ 8  │ Ip:194.254.79.4                      │ crowdsecurity/http-crawl-non_statics      │ FR       │ 2200
Renater                              │ ban:1     │ 2023-04-05 13:17:52.017817973 +0000 UTC │
│ 7  │ Ip:194.254.79.4                      │ crowdsecurity/http-probing                │ FR       │ 2200
Renater                              │ ban:1     │ 2023-04-05 13:17:52.309312166 +0000 UTC │
│ 6  │ Ip:194.254.79.4                      │ crowdsecurity/http-bad-user-agent         │ FR       │ 2200
Renater                              │ ban:1     │ 2023-04-05 13:17:52.017572598 +0000 UTC │
│ 5  │ Ip:83.206.19.140                     │ crowdsecurity/http-crawl-non_statics      │ FR       │ 3215
Orange                               │ ban:1     │ 2023-04-05 13:17:28.44454104 +0000 UTC  │
│ 4  │ Ip:2a01:cb11:6a0:2d00:bfe7:82c4:c724:9eb7 │ crowdsecurity/http-crawl-non_statics      │ FR       │ 3215
Orange                               │ ban:1     │ 2023-04-05 13:14:35.443575184 +0000 UTC │
│ 3  │ Ip:176.168.162.101                   │ crowdsecurity/http-crawl-non_statics      │ FR       │ 5410 Bouygues
Telecom SA                           │ ban:1     │ 2023-04-05 13:14:13.380354035 +0000 UTC │
│ 2  │ Ip:2001:41d0:302:1000::ca9           │ crowdsecurity/http-crawl-non_statics      │ GB       │ 16276 OVH
SAS                                  │ ban:1     │ 2023-04-05 13:12:10.793700983 +0000 UTC │
│ 1  │ Ip:134.158.79.158                    │ crowdsecurity/http-crawl-non_statics      │ FR       │ 789
Renater                              │ ban:1     │ 2023-04-05 13:10:13.259428338 +0000 UTC │
└────┴──────────────────────────────────────┴───────────────────────────────────────────┴
──────────┴──────────────────────────────────────────┴──────────┴──────────────────
─────────────────────────┘
```

Supprimer une décision

```
cscli decisions delete -r 1.2.3.0/24
cscli decisions delete -i 1.2.3.4
cscli decisions delete --id 42
```

Explain

Tester sur les dernieres connexions

```
tail -10 /var/log/httpd/access.miroir.log | cscli explain --verbose --type apache2 -f -
        ├ s02-enrich
        |       ├ □□ crowdsecurity/dateparse-enrich (+2 ~1)
        |               ├ create evt.Enriched.MarshaledTime : 2023-04-06T11:17:39+02:00
        |               ├ update evt.MarshaledTime :  -> 2023-04-06T11:17:39+02:00
        |               ├ create evt.Meta.timestamp : 2023-04-06T11:17:39+02:00
```

```
|       ├ 🟦 crowdsecurity/geoip-enrich (+13)
|            ├ create evt.Enriched.ASNNumber : 16276
|            ├ create evt.Enriched.ASNOrg : OVH SAS
|            ├ create evt.Enriched.IsInEU : true
|            ├ create evt.Enriched.Latitude : 48.858200
|            ├ create evt.Enriched.Longitude : 2.338700
|            ├ create evt.Enriched.ASNumber : 16276
|            ├ create evt.Enriched.IsoCode : FR
|            ├ create evt.Enriched.SourceRange : 51.75.0.0/16
|            ├ create evt.Meta.SourceRange : 51.75.0.0/16
|            ├ create evt.Meta.IsoCode : FR
|            ├ create evt.Meta.ASNOrg : OVH SAS
|            ├ create evt.Meta.IsInEU : true
|            ├ create evt.Meta.ASNNumber : 16276
|       ├ 🟦 crowdsecurity/http-logs (+7)
|            ├ create evt.Parsed.file_ext : .gz
|            ├ create evt.Parsed.file_name :
6ae72f04c86cd50a9999cb618d7dd3ec5940bb2f24ecf194c2444baaf87a0334-updateinfo.xml.gz
|            ├ create evt.Parsed.static_ressource : true
|            ├ create evt.Parsed.file_frag :
6ae72f04c86cd50a9999cb618d7dd3ec5940bb2f24ecf194c2444baaf87a0334-updateinfo.xml
|            ├ create evt.Parsed.impact_completion : true
|            ├ create evt.Parsed.file_dir : /rocky/8.7/PowerTools/x86_64/os/repodata/
|            ├ create evt.Meta.http_args_len : 0
|       └ 🟦 crowdsecurity/whitelists (~2 [whitelisted])
|            └ update evt.Whitelisted : %!s(bool=false) -> true
|            └ update evt.WhitelistReason :  -> private ipv4/ipv6 ip/ranges
       └-------- parser failure 🟦
```

Remarques :

- Whitelise car Pays FR

Mises à jour

```
cscli hub update
INFO[05-04-2023 17:02:49] hub index is up to date
INFO[05-04-2023 17:02:49] Wrote new 651136 bytes index to /etc/crowdsec/hub/.index.json
INFO[05-04-2023 17:02:49] dependency of crowdsecurity/base-http-scenarios : missing scenarios
```

```
crowdsecurity/http-crawl-non_statics, tainted.
INFO[05-04-2023 17:02:49] update for collection crowdsecurity/http-cve available (currently:1.9, latest:2.0)
INFO[05-04-2023 17:02:49] dependency of crowdsecurity/apache2 : sub collection crowdsecurity/base-http-scenarios is broken : missing scenarios crowdsecurity/http-crawl-non_statics, tainted.
```

Il faut update crowdsecurity/http-cve !

```
cscli collections list

COLLECTIONS
─────────────────────────────────────────────────────────────────────────────────────────────────────────────────
 Name                          Status                Version   Local Path
─────────────────────────────────────────────────────────────────────────────────────────────────────────────────
 crowdsecurity/apache2              ✔ enabled                  0.1       /etc/crowdsec/collections/apache2.yaml
 crowdsecurity/base-http-scenarios   ⚠ enabled,tainted           0.6       /etc/crowdsec/collections/base-http-scenarios.yaml
 crowdsecurity/http-cve             ⚠ enabled,update-available   1.9       /etc/crowdsec/collections/http-cve.yaml
 crowdsecurity/linux                ✔ enabled                  0.2       /etc/crowdsec/collections/linux.yaml
 crowdsecurity/sshd                 ✔ enabled                  0.2       /etc/crowdsec/collections/sshd.yaml
```

Mise à jour :

```
cscli collections upgrade crowdsecurity/http-cve
```

Whitelist

Pour repérer les noms sur lesquels s'appuyer, on peut consulter la taxonomy.

Na pas modifier les fichiers dans le dossier hub. Créer un fichier de conf :

```
/etc/crowdsec/parsers/s02-enrich/whitelist-renater.yaml
```

Contenu :

```
name:
ul/whitelists
```

```
description: "Whitelist Renater"
whitelist:

  reason: "Renater"

expression:

    - evt.Meta.ASNNumber == '2200'
```

Lists des parsers :

```
cscli parsers list

PARSERS
──────────────────────────────────────────────────────────────────────────────────────────
 Name                          Status           Version   Local Path
──────────────────────────────────────────────────────────────────────────────────────────
 crowdsecurity/apache2-logs       ✔ enabled           1.3       /etc/crowdsec/parsers/s01-parse/apache2-logs.yaml
 crowdsecurity/dateparse-enrich   ✔ enabled           0.2       /etc/crowdsec/parsers/s02-enrich/dateparse-enrich.yaml
 crowdsecurity/geoip-enrich       ✔ enabled           0.2       /etc/crowdsec/parsers/s02-enrich/geoip-enrich.yaml
 crowdsecurity/http-logs          ✔ enabled           1.1       /etc/crowdsec/parsers/s02-enrich/http-logs.yaml
 crowdsecurity/sshd-logs          ✔ enabled           2.0       /etc/crowdsec/parsers/s01-parse/sshd-logs.yaml
 crowdsecurity/syslog-logs        ✔ enabled           0.8       /etc/crowdsec/parsers/s00-raw/syslog-logs.yaml
 crowdsecurity/whitelists         ⚠ enabled,tainted   ?         /etc/crowdsec/parsers/s02-enrich/whitelists.yaml
 whitelist-renater.yaml           enabled,local                 /etc/crowdsec/parsers/s01-parse/whitelist-renater.yaml
──────────────────────────────────────────────────────────────────────────────────────────
```

On peut tester la whitelist :

```
tail -10 /tmp/4 | cscli explain --verbose --type apache2 -f -
|       ├ crowdsecurity/whitelists (~2 [whitelisted])
        |               ├ update evt.Whitelisted : %!s(bool=false) -> true
        |               ├ update evt.WhitelistReason :  -> Renater
        |       ├ crowdsecurity/whitelists-ipul (~1)
```

```
|           ├ update evt.WhitelistReason : Renater -> UL
|     ├ □□ ul/whitelists-fr (~1)
|           ├ update evt.WhitelistReason : UL -> FR
|     └ □□ ul/whitelists-renater (~1)
|           └ update evt.WhitelistReason : FR -> Renater
```

ZSH

Afficher la palette des couleurs

```
for i in {0..255}; do print -Pn "%K{$i}  %k%F{$i}${(l:3::0:)i}%f " ${${(M)$((i%6)):#3}:+$'\n'}; done
```

Wireguard

Intégration a gnome

```
/git/peta-grafana
└─ sudo nmcli con import type wireguard file /etc/wireguard/proton.conf
Connexion « proton » (32a2e932-9cf4-4e4f-84e5-49cadbdeb455) ajoutée avec succès.
```

Debian

Importer la clef d'un repo

L'erreur

```
Err :4 http://fr.archive.ubuntu.com/ubuntu jammy InRelease
  Les signatures suivantes n'ont pas pu être vérifiées car la clé publique n'est pas disponible : NO_PUBKEY 871920D1991BC93C
```

Correction

```
sudo apt-key adv --keyserver keyserver.ubuntu.com --recv-keys 871920D1991BC93C
```

firewalld

Références :

- https://wiki.fiat-tux.fr/books/administration-syst%C3%A8mes/page/firewalld-un-firewall-simple-a-utiliser

vim

Indenter/Déindenter

Définir le nombre de caractère :

```
:set shiftwidth=4 expandtab
```

Sélectionner le bloc visuel (CTRL+V)

Indenter : ">"

Déindenter : ">"

Debian

Permettre le copier/coller

Décommenter la ligne suivante dans `/etc/vim/vimrc` :

```
let g:skip_defaults_vim = 1
```

Screen

Adapter l'écran en full screen

ECHAP, puis CTRL-A +F

MySQL - MariaDB

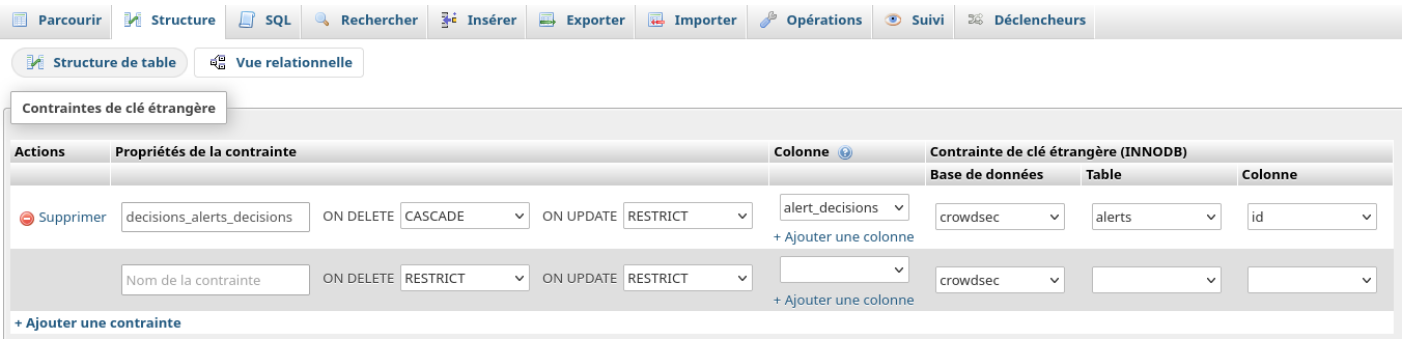
Afficher les contraintes de cascades

Exemple pour la compréhension :

- https://mariadb.com/kb/en/foreign-keys/

Dans phpmyadmin

Sélectionner la table, puis **Structure**, enfin **vue relationnelle**.



En CLI

```
show create table decisions ;
  KEY `simulated` (`simulated`),
  CONSTRAINT `decisions_alerts_decisions` FOREIGN KEY (`alert_decisions`) REFERENCES `alerts` (`id`) ON DELETE CASCADE
) ENGINE=InnoDB AUTO_INCREMENT=34889411 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_bin |
```

Hardened ssh

Référence :

- https://korben.info/ssh-audit-outil-indispensable-securiser-vos-serveurs.html

Supprimer les algos d'échange de clefs

Ajouter a sshd_config :

```
# Key Exchange
KexAlgorithms -ecdh-sha2-nistp256,ecdh-sha2-nistp384,ecdh-sha2-nistp521,ecdsa-sha2-nistp256,hmac-sha1,ecdsa-sha2-nistp256
```

Supprimer les hosts key type vulnérables

Supprimer les fichiers :

- /etc/ssh/ssh_host_ecdsa_key
- /etc/ssh/ssh_host_ecdsa_key.pub

Supprimer les algos MACs vulnérables

Ajouter a sshd_config :

MACs -hmac-sha1,hmac-sha1-etm@openssh.com,hmac-sha2-256,hmac-sha2-512,sntrup761x25519-sha512@openssh.com,umac-128@openssh.com,umac-64-etm@openssh.com,umac-64@openssh.com

Résumé avec une conf adequat

KexAlgorithms curve25519-sha256,curve25519-sha256@libssh.org

Ciphers aes256-gcm@openssh.com,aes128-gcm@openssh.com

MACs hmac-sha2-512-etm@openssh.com,hmac-sha2-256-etm@openssh.com

Arch Linux

Gestion des touches de réglage audio

```
sudo pacman -S kglobalaccel plasma-pa
```