

1 Adding users

```
systemd-coredump:x:999:999:systemd Core Dumper:/:usr/sbin/nologin
james:x:1001:1001:,,,:/home/james:/bin/bash
connor:x:1002:1002:,,,:/home/connor:/bin/bash
dave:x:1003:1003:dave,0,0,0,0:/home/dave:/bin/bash
mike:x:1004:1004:mike,0,0,0,0:/home/mike:/bin/bash
smomot@smomot-VirtualBox:~$
```

Two users have sudo permissions and two do not

```
smomot@smomot-VirtualBox:~$ sudo -l -U james
User james is not allowed to run sudo on smomot-VirtualBox.
smomot@smomot-VirtualBox:~$ sudo -l -U connor
User connor is not allowed to run sudo on smomot-VirtualBox.
smomot@smomot-VirtualBox:~$ sudo -l -U dave
Matching Defaults entries for dave on smomot-VirtualBox:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

User dave may run the following commands on smomot-VirtualBox:
    (ALL : ALL) ALL
smomot@smomot-VirtualBox:~$ sudo -l -U mike
Matching Defaults entries for mike on smomot-VirtualBox:
    env_reset, mail_badpass,
    secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin

User mike may run the following commands on smomot-VirtualBox:
    (ALL : ALL) ALL
smomot@smomot-VirtualBox:~$
```

2 HDD Configuration

: Backup partition

Disks

11 GB Hard Disk
VBOX HARDDISK

5.4 GB Hard Disk
VBOX HARDDISK

CD/DVD Drive
VBOX CD-ROM

5.4 GB Hard Disk
/dev/sdb

Model VBOX HARDDISK (1.0)
Size 5.4 GB (5,368,709,120 bytes)
Partitioning GUID Partition Table
Serial Number VB715ed278-cfd618f9
Assessment SMART is not supported

Volumes

backups
Partition 1
1.0 GB Ext4

mike
Partition 2
1.0 GB Ext4

dave
Partition 3
1.0 GB Ext4

connor
Partition 4
1.0 GB Ext4

james
Partition 5
1.4 GB Ext4

Size 1.0 GB — 965 MB free (3.5% full)
Device /dev/sdb1
UUID 0a32d318-f583-4665-9f27-574a2e8b3802
Partition Type Linux Filesystem
Contents Ext4 (version 1.0) — Mounted at [/backups](#)

User drives

Disks

11 GB Hard Disk
VBOX HARDDISK

5.4 GB Hard Disk
VBOX HARDDISK

CD/DVD Drive
VBOX CD-ROM

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Model VBOX HARDDISK (1.0)

Size 5.4 GB (5,368,709,120 bytes)

Partitioning GUID Partition Table

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Volumes

backups
Partition 1
1.0 GB Ext4

mike
Partition 2
1.0 GB Ext4

dave
Partition 3
1.0 GB Ext4

connor
Partition 4
1.0 GB Ext4

james
Partition 5
1.4 GB Ext4

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★▶

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Size 1.0 GB — 965 MB free (3.5% full)

Device /dev/sdb2

UUID f6c7f2f0-76ec-4dbf-9ada-c244f6e77fa0

Partition Type Linux Filesystem

Contents Ext4 (version 1.0) — Mounted at [/home/mike/mydrive](#)

Disks

11 GB Hard Disk
VBOX HARDDISK

5.4 GB Hard Disk
VBOX HARDDISK

CD/DVD Drive
VBOX CD-ROM

5.4 GB Hard Disk
/dev/sdb

Model VBOX HARDDISK (1.0)

Size 5.4 GB (5,368,709,120 bytes)

Partitioning GUID Partition Table

Serial Number VB715ed278-cfd618f9

Assessment SMART is not supported

Volumes

backups
Partition 1
1.0 GB Ext4

mike
Partition 2
1.0 GB Ext4

dave
Partition 3
1.0 GB Ext4

connor
Partition 4
1.0 GB Ext4

james
Partition 5
1.4 GB Ext4

★▶

★▶

★▶

★▶

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Size 1.0 GB — 965 MB free (3.5% full)

Device /dev/sdb3

UUID 1ee99a72-beec-4e31-8c8f-54de0689e9bd

Partition Type Linux Filesystem

Contents Ext4 (version 1.0) — Mounted at [/home/dave/mydrive](#)

Disks

11 GB Hard Disk
VBOX HARDDISK

5.4 GB Hard Disk
VBOX HARDDISK

CD/DVD Drive
VBOX CD-ROM

5.4 GB Hard Disk
/dev/sdb

Model VBOX HARDDISK (1.0)
Size 5.4 GB (5,368,709,120 bytes)
Partitioning GUID Partition Table
Serial Number VB715ed278-cfd618f9
Assessment SMART is not supported

Volumes

backups
Partition 1
1.0 GB Ext4

mike
Partition 2
1.0 GB Ext4

dave
Partition 3
1.0 GB Ext4

connor
Partition 4
1.0 GB Ext4

james
Partition 5
1.4 GB Ext4

Size 1.0 GB — 965 MB free (3.5% full)
Device /dev/sdb4
UUID 4494b700-fcf6-40a4-b7f5-f9e7c23fa41b
Partition Type Linux Filesystem
Contents Ext4 (version 1.0) — Mounted at [/home/connor/mydrive](#)

Disks

11 GB Hard Disk
VBOX HARDDISK

5.4 GB Hard Disk
VBOX HARDDISK

CD/DVD Drive
VBOX CD-ROM

5.4 GB Hard Disk
/dev/sdb

Model VBOX HARDDISK (1.0)
Size 5.4 GB (5,368,709,120 bytes)
Partitioning GUID Partition Table
Serial Number VB715ed278-cfd618f9
Assessment SMART is not supported

Volumes

backups
Partition 1
1.0 GB Ext4

mike
Partition 2
1.0 GB Ext4

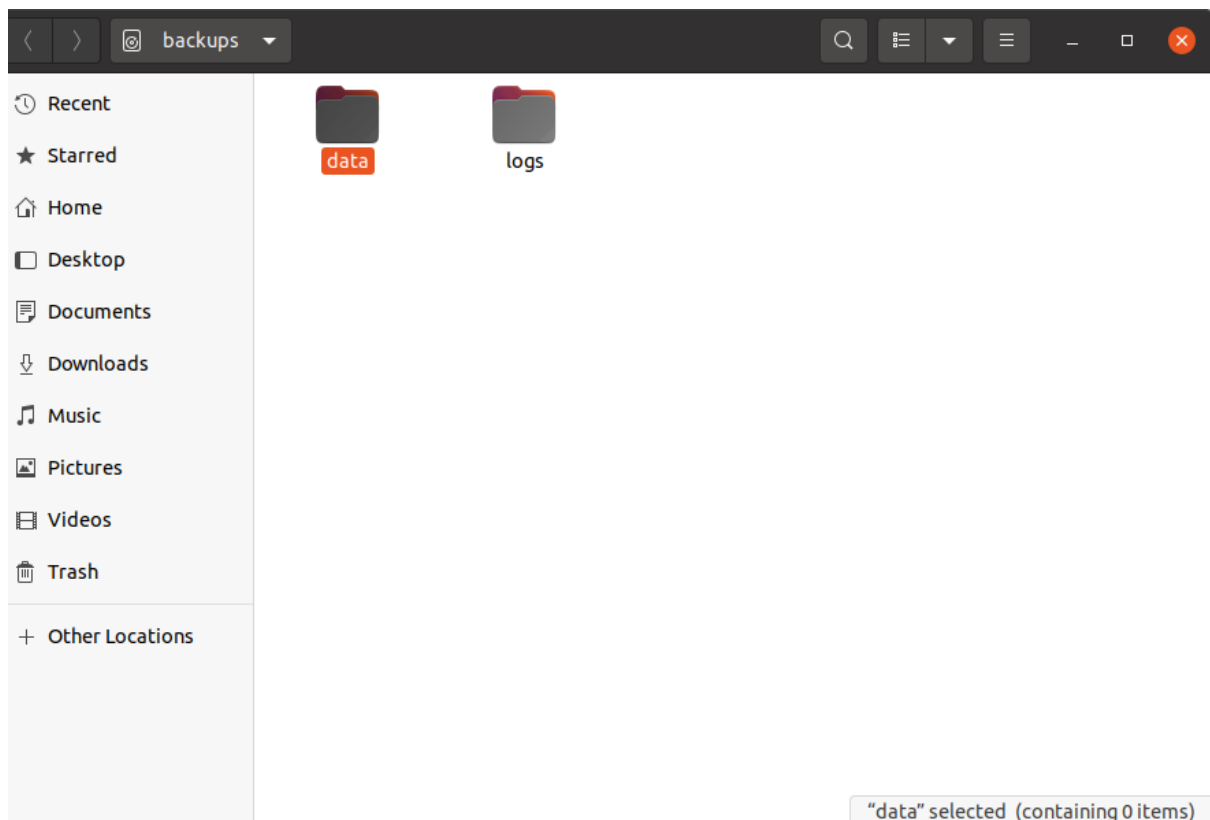
dave
Partition 3
1.0 GB Ext4

connor
Partition 4
1.0 GB Ext4

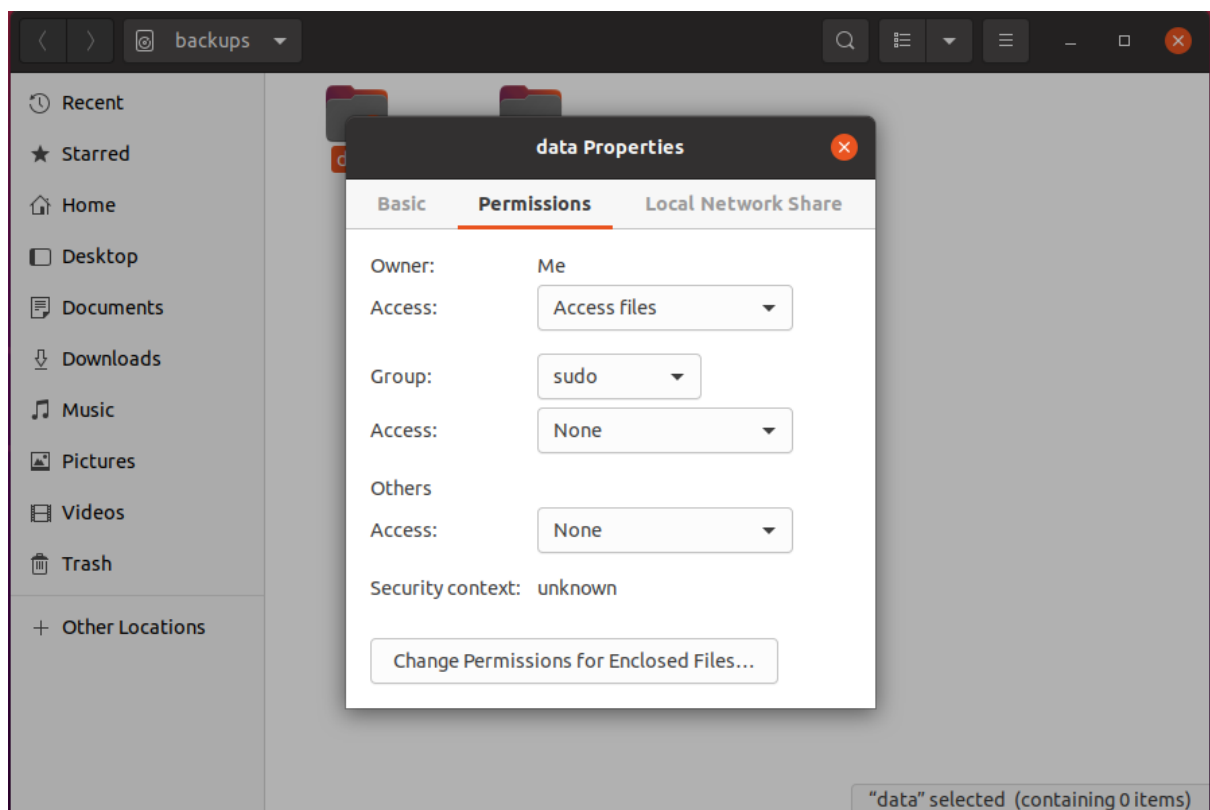
james
Partition 5
1.4 GB Ext4

Size 1.4 GB — 1.3 GB free (4.3% full)
Device /dev/sdb5
UUID 1b30c5f5-530e-4a41-9a6e-00f528ddc60c
Partition Type Linux Filesystem
Contents Ext4 (version 1.0) — Mounted at [/home/james/mydrive](#)

Folders in backups



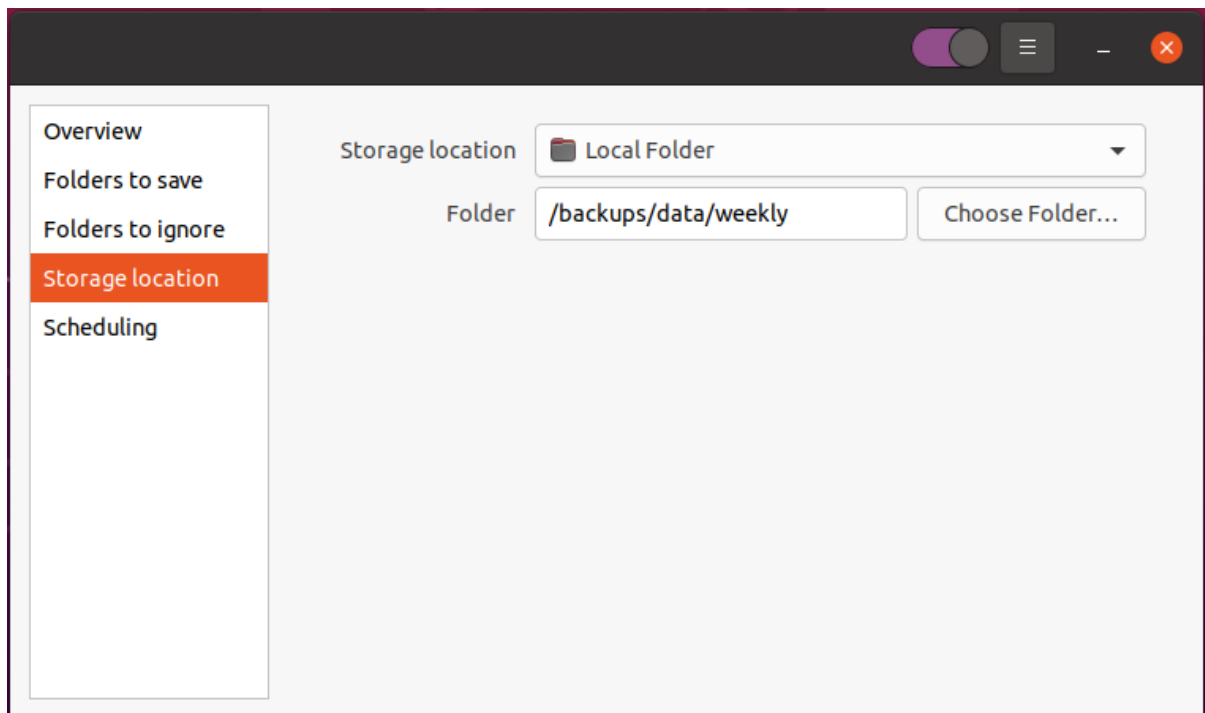
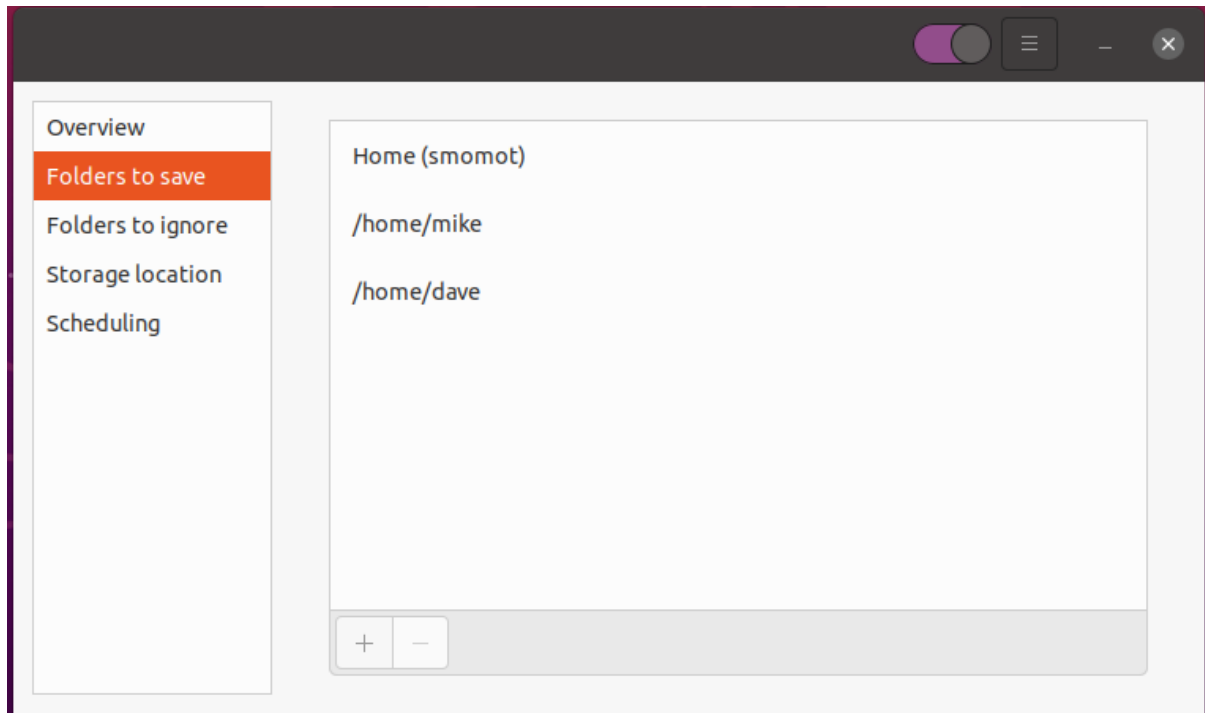
Locking the folders for other users

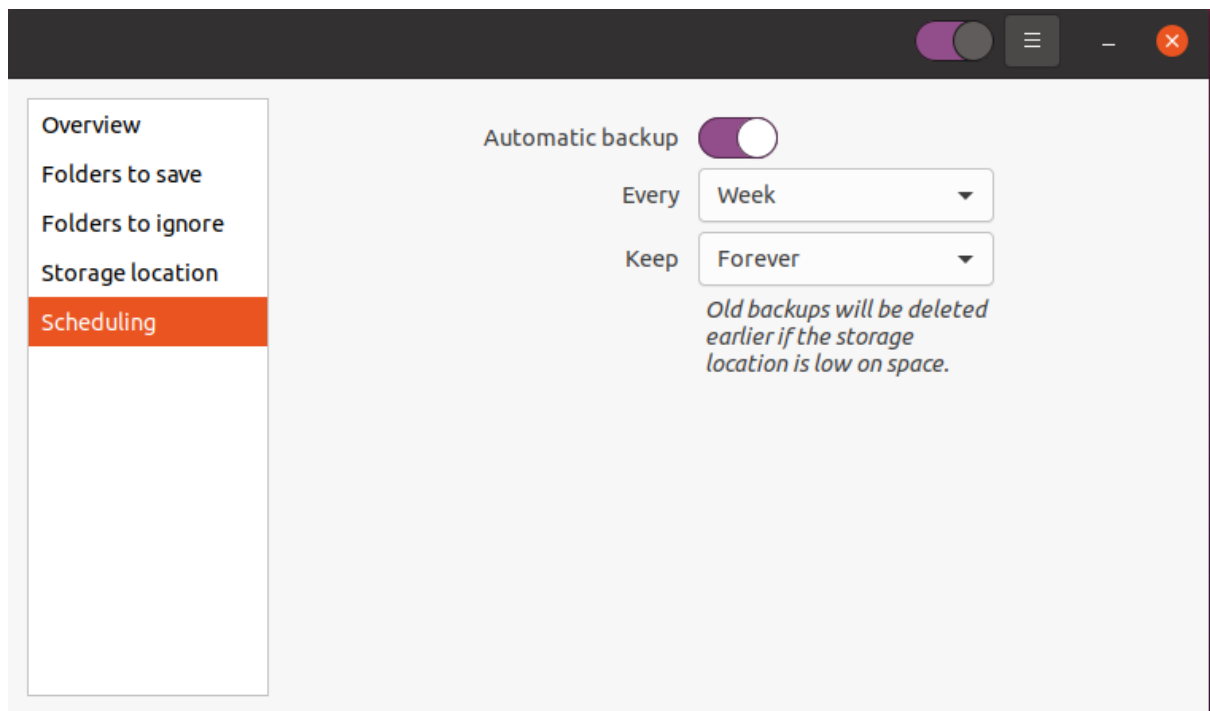


Assigning the partition to each user

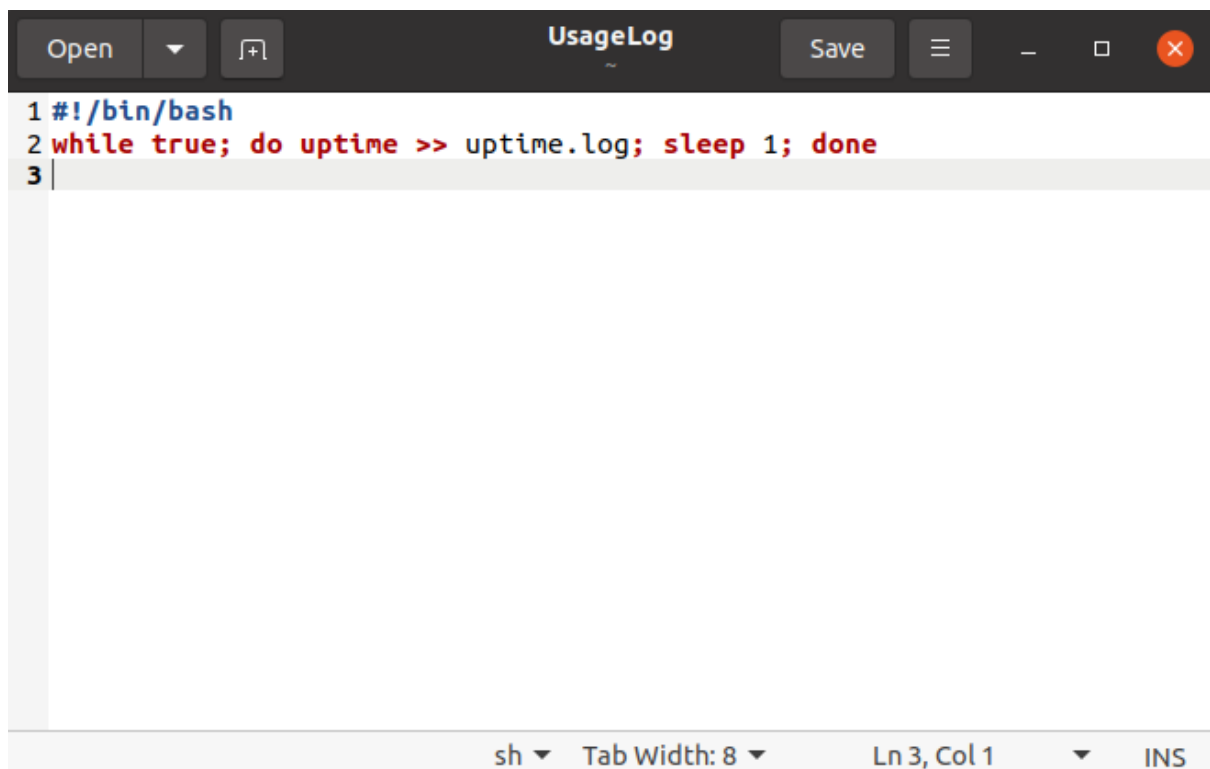
```
smomot@smomot-VirtualBox:~$ sudo chown mike:mike /home/mike/mydrive -R
smomot@smomot-VirtualBox:~$ sudo chown dave:dave /home/dave/mydrive -R
smomot@smomot-VirtualBox:~$ sudo chown connor:connor /home/connor/mydrive -R
```

Backups





Performance Monitoring



Activities Text Editor Dec 19 21:22

uptime.log Save

```
84 21:21:47 up 11 min, 1 user, load average: 0.44, 0.20, 0.12
85 21:21:48 up 11 min, 1 user, load average: 0.40, 0.20, 0.12
86 21:21:49 up 11 min, 1 user, load average: 0.40, 0.20, 0.12
87 21:21:50 up 11 min, 1 user, load average: 0.40, 0.20, 0.12
88 21:21:51 up 11 min, 1 user, load average: 0.40, 0.20, 0.12
89 21:21:52 up 11 min, 1 user, load average: 0.40, 0.20, 0.12
90 21:21:53 up 12 min, 1 user, load average: 0.37, 0.20, 0.12
91 21:21:54 up 12 min, 1 user, load average: 0.37, 0.20, 0.12
92 21:21:55 up 12 min, 1 user, load average: 0.37, 0.20, 0.12
93 21:21:56 up 12 min, 1 user, load average: 0.37, 0.20, 0.12
94 21:21:57 up 12 min, 1 user, load average: 0.37, 0.20, 0.12
95 21:21:58 up 12 min, 1 user, load average: 0.34, 0.19, 0.12
96 21:21:59 up 12 min, 1 user, load average: 0.34, 0.19, 0.12
97 21:22:00 up 12 min, 1 user, load average: 0.34, 0.19, 0.12
98 21:22:01 up 12 min, 1 user, load average: 0.34, 0.19, 0.12
99 21:22:02 up 12 min, 1 user, load average: 0.34, 0.19, 0.12
100 21:22:03 up 12 min, 1 user, load average: 0.31, 0.19, 0.12
101 21:22:04 up 12 min, 1 user, load average: 0.31, 0.19, 0.12
102 21:22:05 up 12 min, 1 user, load average: 0.31, 0.19, 0.12
103 21:22:06 up 12 min, 1 user, load average: 0.31, 0.19, 0.12
104 21:22:07 up 12 min, 1 user, load average: 0.31, 0.19, 0.12
105 21:22:08 up 12 min, 1 user, load average: 0.29, 0.19, 0.12
106 21:22:09 up 12 min, 1 user, load average: 0.29, 0.19, 0.12
107 21:22:10 up 12 min, 1 user, load average: 0.29, 0.19, 0.12
108 21:22:11 up 12 min, 1 user, load average: 0.29, 0.19, 0.12
109 21:22:12 up 12 min, 1 user, load average: 0.29, 0.19, 0.12
110 21:22:13 up 12 min, 1 user, load average: 0.27, 0.18, 0.12
111 21:22:14 up 12 min, 1 user, load average: 0.27, 0.18, 0.12
```

Plain Text Tab Width: 8 Ln 47, Col 62 INS

Syn Flood Detection Service

SynCookiesChecker Save

SynCookiesChecker calc.log syncookies.log

```
1 #!/bin/bash
2 if grep -q 1 /proc/sys/net/ipv4/tcp_syncookies; then
3 netstat -nt > calc.log ;
4 File=/calc.log
5 if [ -f $File ] ; then
6 cnt=$(cat $File | wc -l)
7 if [ $cnt -gt 10 ]
8 then
9 while :
10 do
11 netstat -nt >>syncookies.log
12 sleep 1;
13 done
14 fi ;
15 fi ;
16 fi ;
```

sh Tab Width: 8 Ln 16, Col 5 INS


```
1 Active Internet connections (w/o servers)
2 Proto Recv-Q Send-Q Local Address           Foreign Address         State
3 tcp        0      0 10.0.2.15:50762        52.39.242.231:443      ESTABLISHED
```

Plain Text ▾ Tab Width: 8 ▾ Ln 3, Col 80 ▾ INS

```
1 root:x:0:0:root:/root:/bin/bash
```

Plain Text ▾ Tab Width: 8 ▾ Ln 1, Col 1 ▾ INS

Attempt to make a SystemD service

```
smomot@smomot-VirtualBox: /etc/systemd/system
smomot@smomot-VirtualBox:~$ cd /etc/systemd/system
smomot@smomot-VirtualBox:/etc/systemd/system$ sudo vim SynCookiesChecker
[sudo] password for smomot:
sudo: vim: command not found
smomot@smomot-VirtualBox:/etc/systemd/system$ sudo vim SynCookiesChecker.service
sudo: vim: command not found
smomot@smomot-VirtualBox:/etc/systemd/system$
```

Custom kernel

```
smomot@smomot-VirtualBox:~$ sudo apt-get install git fakeroot build-essential ncurses-dev xz-utils libssl-dev bc
[sudo] password for smomot:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Note, selecting 'libncurses-dev' instead of 'ncurses-dev'
bc is already the newest version (1.07.1-2build1).
bc set to manually installed.
xz-utils is already the newest version (5.2.4-1ubuntu1).
xz-utils set to manually installed.
The following packages were automatically installed and are no longer required:
  chromium-codecs-ffmpeg-extra gstreamer1.0-vaapi libgstreamer-plugins-bad1.0-0
  libva-wayland2
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu dpkg-dev g++ g++-9 gcc gcc-9 git-man
  libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libasan5
  libatomic1 libbinutils libc-dev-bin libc6-dev libcrypt-dev libctf-nobfd0 libctf0
  liberror-perl libfakeroot libgcc-9-dev libitm1 liblsan0 libquadmath0 libstdc++-9-dev
  libtsan0 libubsan1 linux-libc-dev make manpages-dev
Suggested packages:
  binutils-doc debian-keyring g++-multilib g++-9-multilib gcc-9-doc gcc-multilib autoconf
  automake libtool flex bison gcc-doc gcc-9-multilib gcc-9-locales git-daemon-run
  | git-daemon-sysvinit git-doc git-el git-email git-gui gitk gitweb git-cvs git-mediawiki
  git-svn glibc-doc ncurses-doc libssl-doc libstdc++-9-doc make-doc
The following NEW packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu build-essential dpkg-dev fakeroot g++
  g++-9 gcc gcc-9 git git-man libalgorithm-diff-perl libalgorithm-diff-xs-perl
  libalgorithm-merge-perl libasan5 libatomic1 libbinutils libc-dev-bin libc6-dev
  libcrypt-dev libctf-nobfd0 libctf0 liberror-perl libfakeroot libgcc-9-dev libitm1
  liblsan0 libncurses-dev libquadmath0 libssl-dev libstdc++-9-dev libtsan0 libubsan1
  linux-libc-dev make manpages-dev
0 upgraded, 37 newly installed, 0 to remove and 0 not upgraded.
Need to get 41.8 MB of archives.
After this operation, 205 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ie.archive.ubuntu.com/ubuntu focal-updates/main amd64 binutils-common amd64 2.34-6ubuntu1.3 [207 kB]
Get:2 http://ie.archive.ubuntu.com/ubuntu focal-updates/main amd64 libbinutils amd64 2.34-6ubuntu1.3 [474 kB]
Get:3 http://ie.archive.ubuntu.com/ubuntu focal-updates/main amd64 libctf-nobfd0 amd64 2.34-6ubuntu1.3 [47.4 kB]
Get:4 http://ie.archive.ubuntu.com/ubuntu focal-updates/main amd64 libctf0 amd64 2.34-6ubuntu1.3 [46.6 kB]
Get:5 http://ie.archive.ubuntu.com/ubuntu focal-updates/main amd64 binutils-x86-64-linux-gnu amd64 2.34-6ubuntu1.3 [1,613 kB]
```

Installing kernel package

```
smomot@smomot-VirtualBox:~$ sudo apt-get install kernel-package
Reading package lists... Done
Building dependency tree
Reading state information... Done
```

Installing linux kernel source code:

```
smomot@smomot-VirtualBox: ~
smomot@smomot-VirtualBox:~$ wget https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.9.11.tar.sign
--2021-12-19 19:13:57-- https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.9.11.tar.sign
Resolving cdn.kernel.org (cdn.kernel.org)... 199.232.25.176, 2a04:4e42:43::432
Connecting to cdn.kernel.org (cdn.kernel.org)|199.232.25.176|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 833 [text/plain]
Saving to: 'linux-4.9.11.tar.sign'

linux-4.9.11.tar.si  0%[                  ]    0  --.-KB/s   in 0.001s

Cannot write to 'linux-4.9.11.tar.sign' (Success).
smomot@smomot-VirtualBox:~$ wget wget https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.9.11.tar.xz
--2021-12-19 19:14:11-- http://wget/
Resolving wget (wget)... failed: Temporary failure in name resolution.
wget: unable to resolve host address 'wget'
--2021-12-19 19:14:11-- https://cdn.kernel.org/pub/linux/kernel/v4.x/linux-4.9.11.tar.xz
Resolving cdn.kernel.org (cdn.kernel.org)... 199.232.25.176, 2a04:4e42:43::432
Connecting to cdn.kernel.org (cdn.kernel.org)|199.232.25.176|:443... connected.
HTTP request sent, awaiting response... 200 OK
```