

NEXTCLOUD PI

Install Nextcloudpi onto SD card

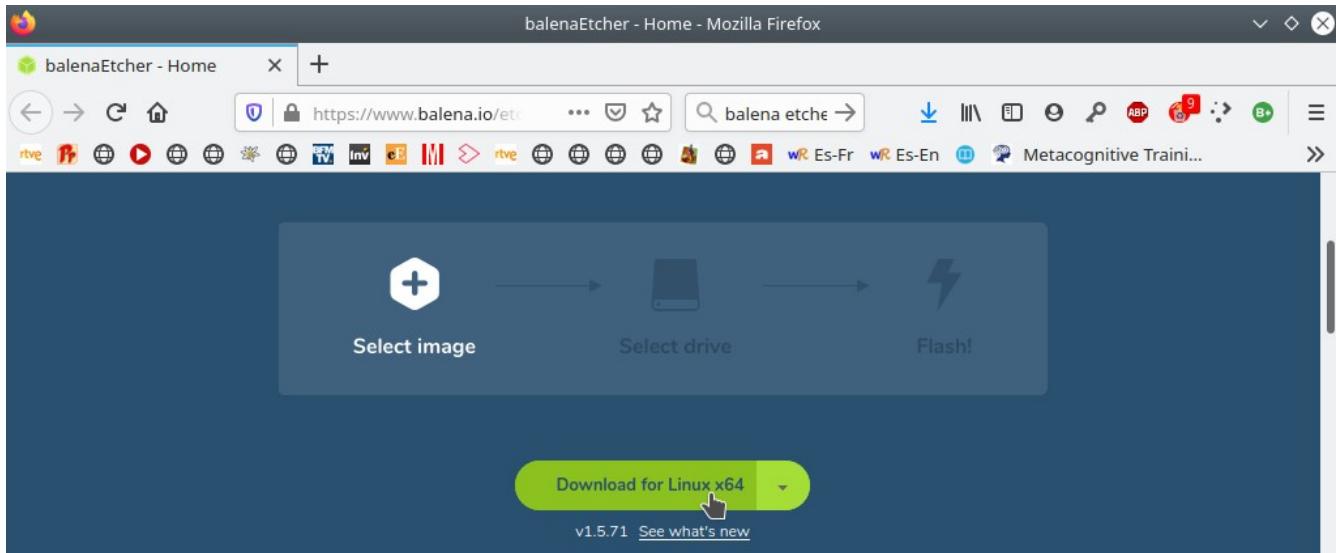
1. **Install Gparted (for windows, you can use Windows Computer Management or Partition Magic)**

a) `sudo apt-get install gparted`

2. **Format SD card to FAT32 (SD bigger than 8Gb)**

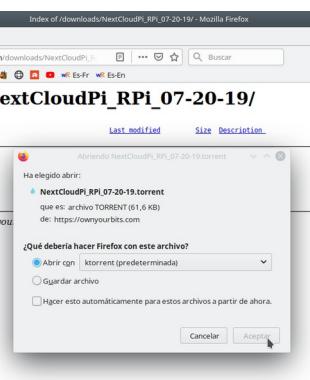
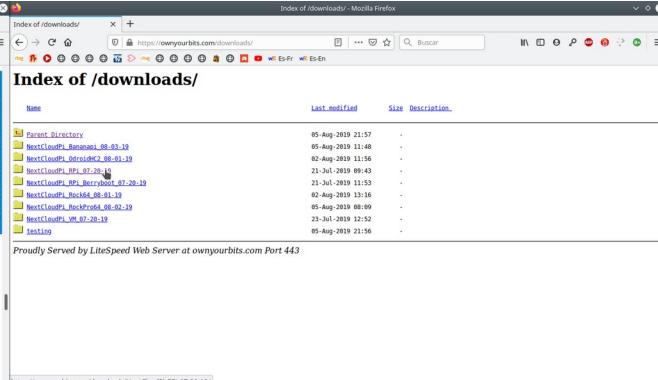
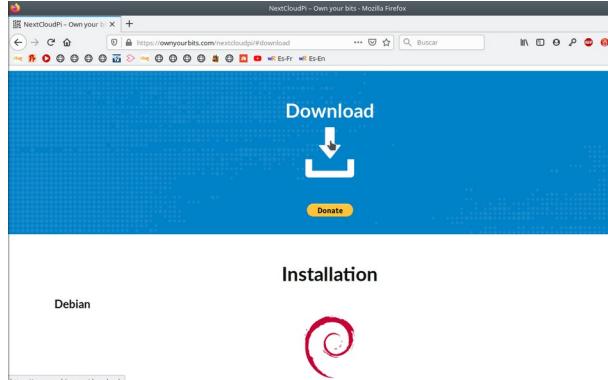
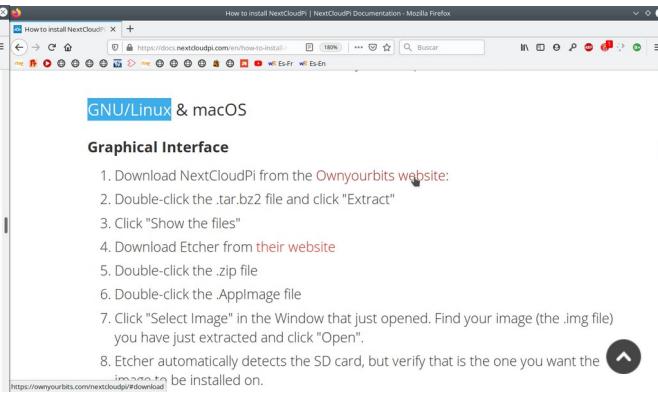
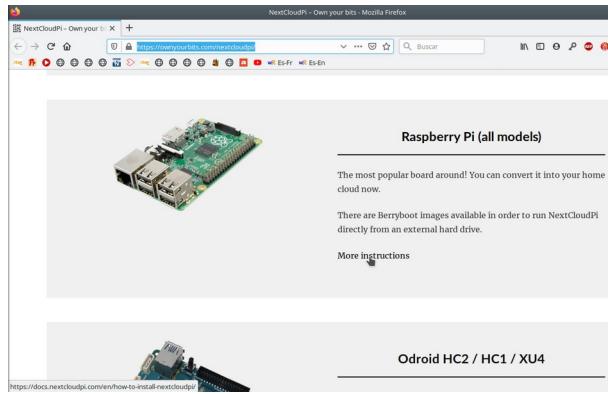
3. **Install Balena Etcher (available for windows):**

a) <https://www.balena.io/etcher/> → Download → Unzip → Install



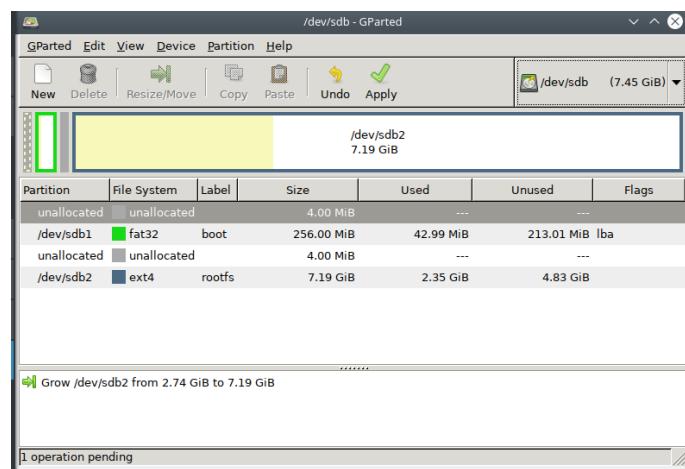
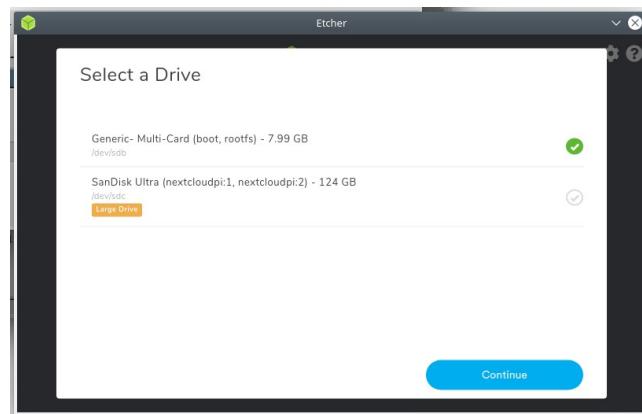
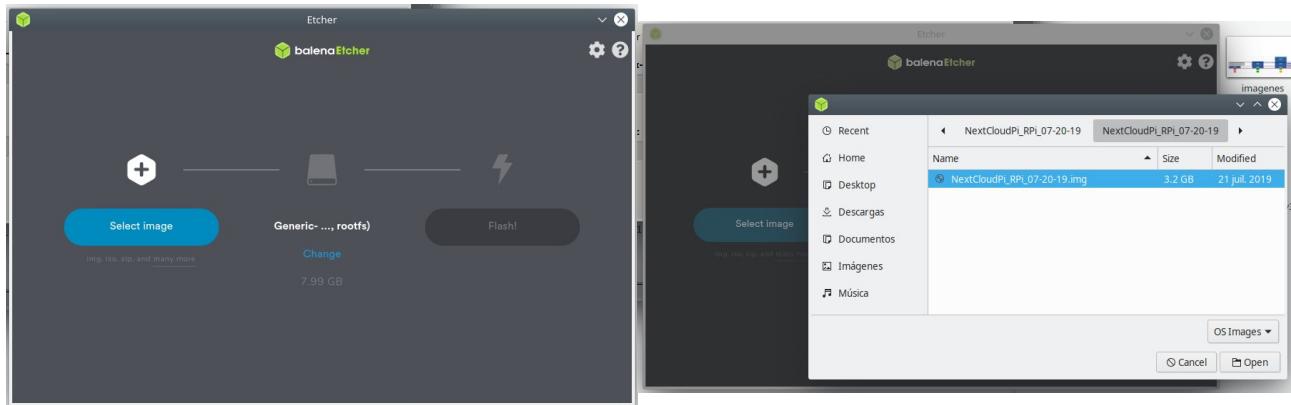
4. Download NextcloudPi

- a) <https://ownyourbits.com/nextcloudpi/> → RaspberryPi : More instructions → Ownyourbitswebsite
- b) Download : NextCloudPi_RPi_mm-dd-yy.tar.bz2
- c) Un zip NextCloudPi_RPi_mm-dd-yy.tar.bz2
- d) You will find the file NextCloudPi_RPi_mm-dd-yy.img
- e) **mm-dd-yy** : Month, day and year of distribution



5. Install Nextcloudpi onto SD card

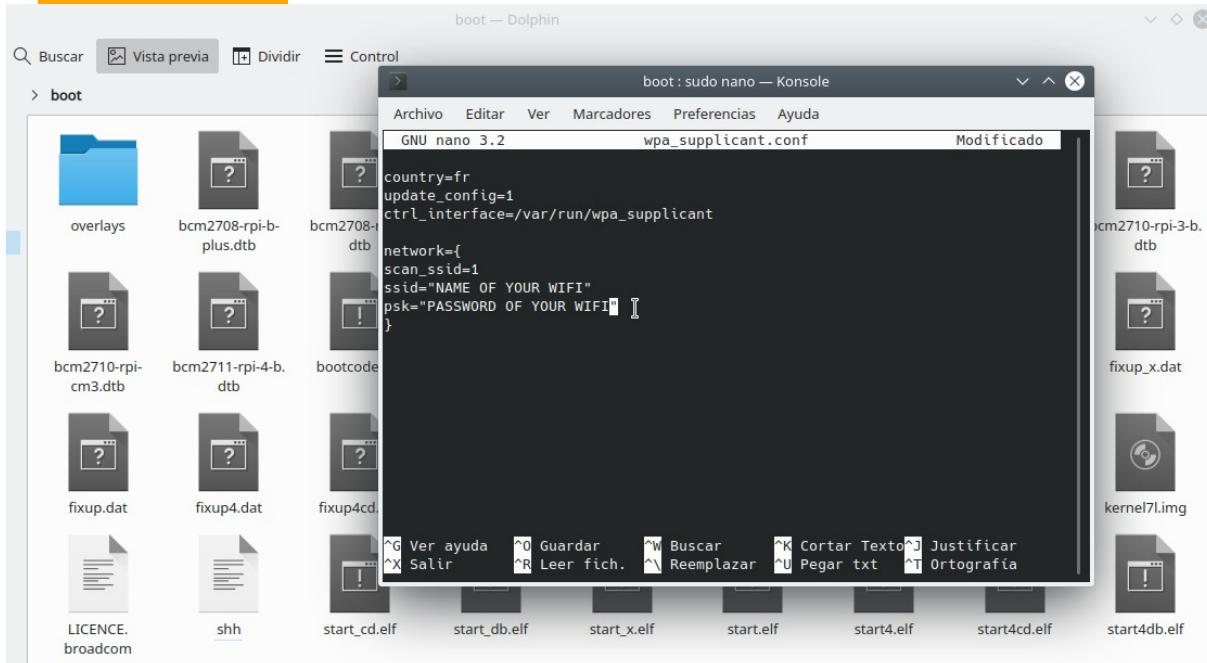
- a) Open Balena Etcher → *Select image* → *NextCloudPi_RPi_mm-dd-yy.img*
- b) Select your SD card → *Change* → *Flash*
- c) Then, open Gparted to resize the partition installed and to use all SD card capacity (Not make SWAP partition!)



Acces to Nextcloudpi from PC

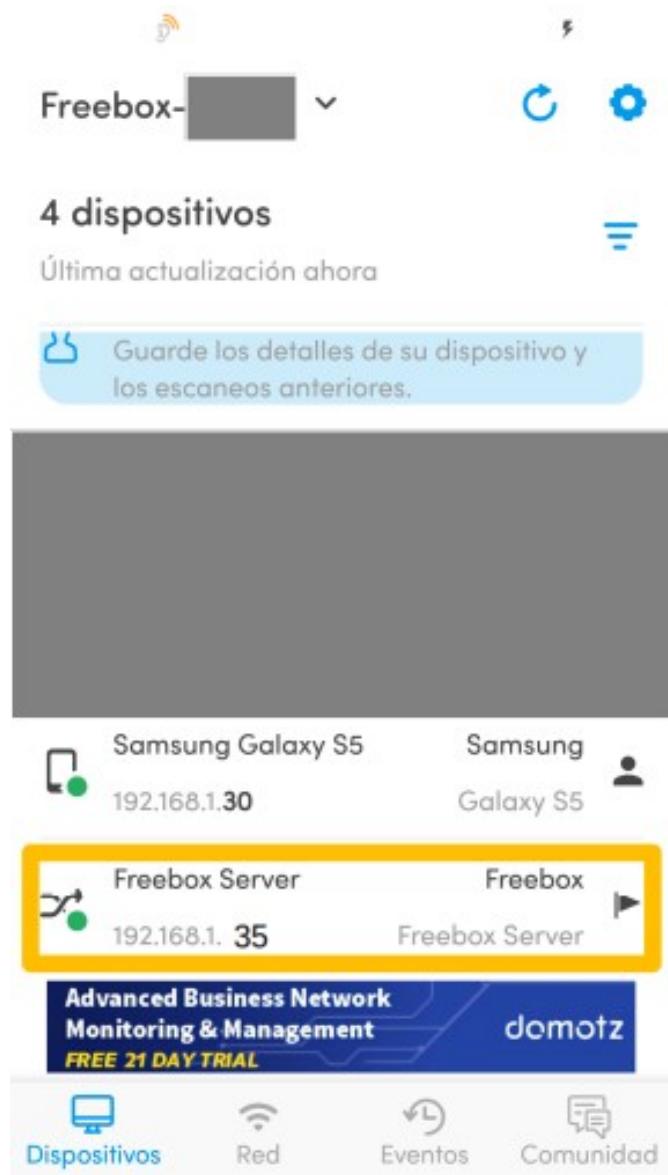
1. With the SD card in the PC

- a) Now, your SD card has 2 partitions : *BOOT* and *ROOTFS*
- b) Go to *BOOT* partition of your SD card
 - Create a file called *ssh* (without extension)
 - Create a file called *wpa_supplicant.conf*
 - Edit *wpa_supplicant.conf* with the BlocNote
 - Paste the code below:
 - `country=fr
update_config=1
ctrl_interface=/var/run/wpa_supplicant
network={
scan_ssid=1
ssid="Wifi name or ssid"
psk="Wifi Password"
}`
 - **Wifi name or ssid**
 - **Wifi Password**



2. Static address for the Raspberry Pi

- a) Install PuTTY (available for windows)
- b) To know the router IP address in LINUX
 - `ip r`
 - And the number after “default via” is the **IP address of your router**. For example **192.168.1.35**
- c) To know the router IP address in any operating system
 - Install the application Fing in your smartphone
 - Then, connect your smartphone by wifi and looking for the devices connected
 - You will recognize your IP address of your router (in my case **192.168.1.35** see the orange square)



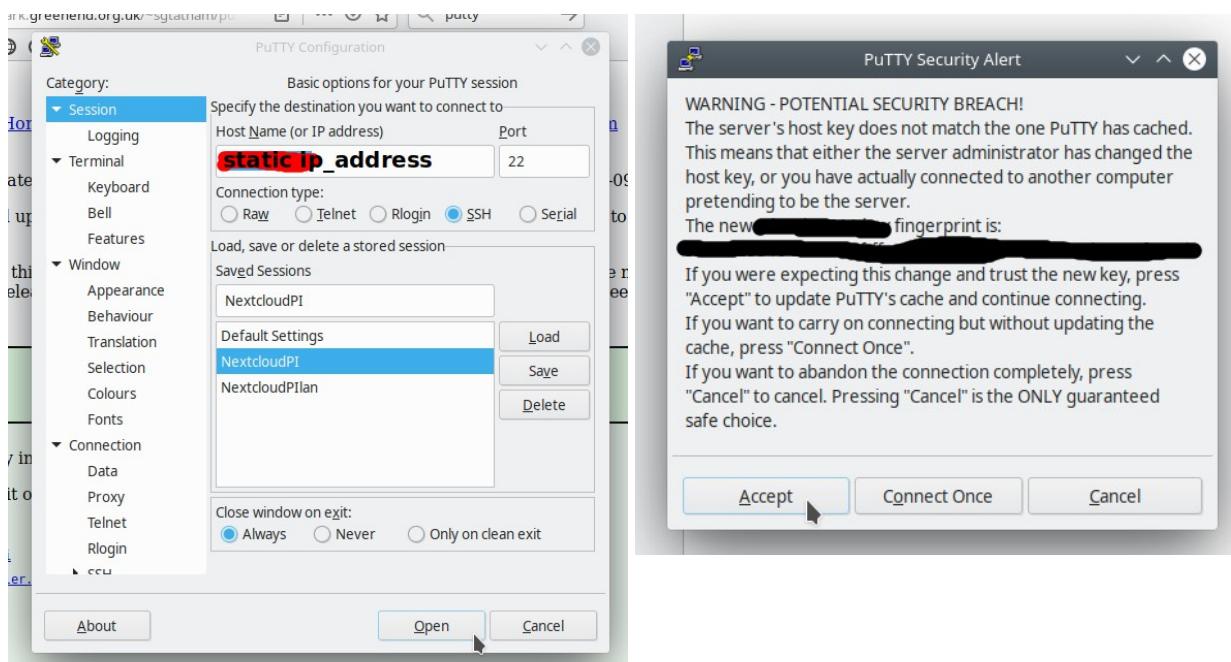
- d) Go to ***ROOTFS*** partition of your SD card and open the file ***/Etc/dhcpcd.conf***
- Edit ***dhcpcd.conf*** with the BlocNote
 - Paste the code below at the end of document:
- ```
interface eth0
static ip_address=192.168.1.200/24
static routers=192.168.1.35
static domain_name_servers=192.168.1.35

interface wlan0
static ip_address=192.168.1.200/24
static routers=192.168.1.35
static domain_name_servers=192.168.1.35
```
- e) **IP address of RaspberryPI, for example: 192.168.1.200 (in order to prevent problems, the last number "200", should be close to 200)**
- Each device has an IP addressee for the router. So, you can verify with the application Fing, if the IP address is free.

### 3. Extract the SD card from the PC, put it in the raspberry Pi

### 4. Open PuTTY

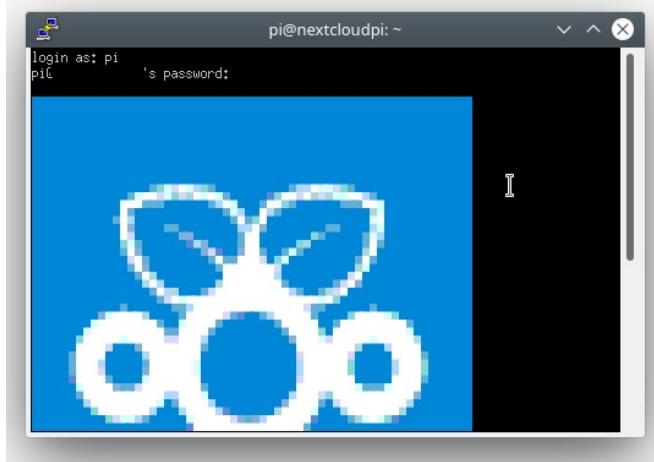
- In *Host Name*, you can write the raspberry **IP adresse of RaspberryPI** → *Open*
- The first time, you have to accept the security alert
- The first time can take same minutes
- For to copy/paste you can push the mouse scroll wheel



## 5. Raspberry pi connection from PC

a) By Default, the id and the password are ;

- ID : pi
- PASSWORD: raspberry



## 6. The first connection, you should to change the password

a) sudo passwd root

- **PASSWORD-Pi**

b) sudo passwd

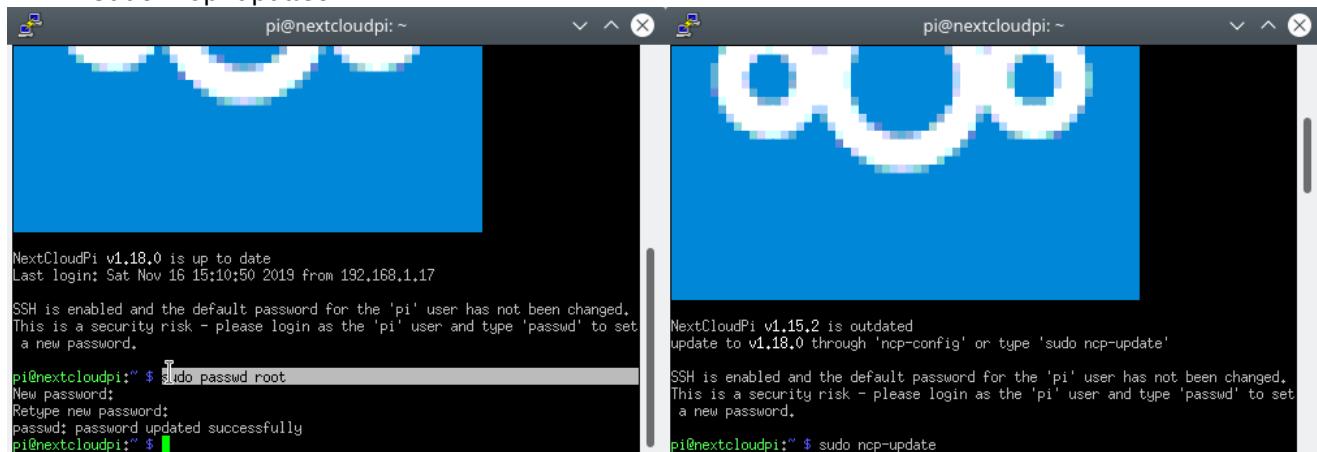
- **PASSWORD-Pi**

c) Change time zone

- sudo raspi-config → 4 Localisation Options → Change Time Zone

d) Upload the systeme

- sudo ncp-update



e) Turn off the Raspberry Pi

- sudo poweroff

# Configuration of RAID

1. For information about the RAIDs <https://en.wikipedia.org/wiki/RAID>

2. Connect the HDDs to the HUB and the HUB to the Raspberry Pi

- a) About the HUB, my recommendation is the HUB USB 3.0 from AmazonBasics :

[https://www.amazon.com/AmazonBasics-USB-C-3-1-adaptador-alimentaci%C3%B3n/dp/B076YN9FW4?ref\\_=ast\\_sto\\_dp](https://www.amazon.com/AmazonBasics-USB-C-3-1-adaptador-alimentaci%C3%B3n/dp/B076YN9FW4?ref_=ast_sto_dp)



- b) Install the programs for the raid

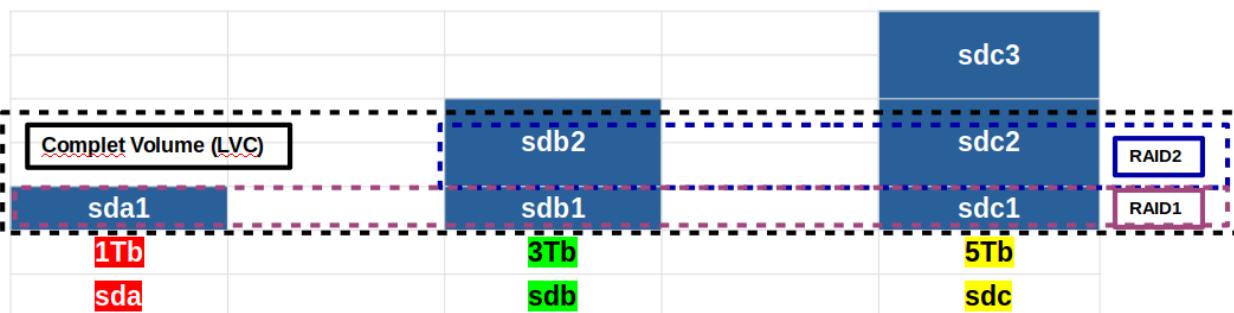
- sudo apt-get install lvm2 mdadm ntfs-3g
- sudo reboot

3. Assuming that the HDDs have not the same capacity and in order to optimize the HDDs capacity, the HDDs will be parted as below with Gparted (or another in windows)

- a) The format is not important, but my recommendation is *EXT4*

- b) For example:

- Assuming that I have 3 HDDs, and the smallest **HDD have 1Tb (sda)**. I should to make 1 partition of 1Tb to 2 others HDDs.
- The second smallest **HDD of 2Tb (sdb)** would have a **1<sup>st</sup> partition (sdb1)** of 1Tb and a **2<sup>nd</sup> partition (sdb2)** of 2Tb. So, we should make a **2<sup>nd</sup> partition (sdc2)** of 2Tb too in the **HDD of 5Tb**.
- The **3<sup>rd</sup> partition (sdc3)** of 2Tb of HDD of 5Tb couldn't be used
- The RAID 1 will be composed by the partitions of 1Tb (sda1, sdb1 and sdc1)
- The RAID 2 will be composed by the partitions of 1Tb (sdb2 and sdc2)
- Finally, the RAID 1 and the RAID 2 will be in a same volume. This volume will be used "as a simple HDD" but if a HDD is broken, we will not lost the information



#### **4. Creating the RAIDs following the previous structure.**

**For this example, I have used the smaller HDDs (1Gb, 3Gb and 5Gb instead of 1Tb, 3Tb and 5Tb) because it's only for showing but it's exactly the same steps**

- a) To see the partitions of your HDDs

- sudo fdisk -l
  - We can see the HDDs (1Gb, 3Gb and 5Gb) and theirs partitions in the square red, green and yellow,

```
pi@nextcloudpi: ~
```

```
pi@nextcloudpi: ~$ sudo fdisk -l
Disk /dev/ram0: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram1: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram2: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram3: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram4: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram5: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram6: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram7: 4 MiB, 4194304 bytes, 8192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

pi@nextcloudpi: ~
```

```
pi@nextcloudpi: ~
```

```
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/mmcblk0: 7.5 GiB, 7994343424 bytes, 15613952 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x6c506e13

Device Boot Start End Sectors Size Id Type
/dev/mmcblk0p1 8192 532479 524288 256M c W95 FAT32 (LBA)
/dev/mmcblk0p2 532480 15613951 15081472 7.2G 83 Linux

Disk /dev/sda: 4 GiB, 4089446400 bytes, 7987200 sectors
Disk model: Flash Disk
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/sdb: 28.7 GiB, 30752636928 bytes, 60063744 sectors
Disk model: Ultra
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x32ffa45d

Device Boot Start End Sectors Size Id Type
/dev/sdb1 2048 2050047 2049000 1000M 83 Linux
/dev/sdb2 2050048 6146047 4096000 2G 83 Linux

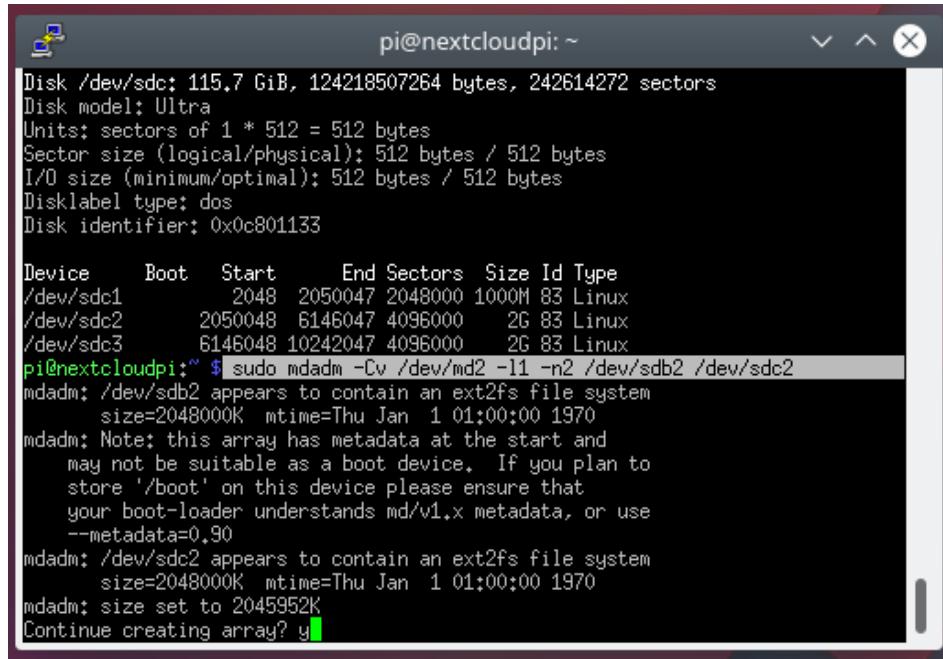
Disk /dev/sdc: 115.7 GiB, 124218507264 bytes, 242614272 sectors
Disk model: Ultra
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x0c801133

Device Boot Start End Sectors Size Id Type
/dev/sd01 2048 2050047 2048000 1000M 83 Linux
/dev/sd02 2050048 6146047 4096000 2G 83 Linux
/dev/sd03 6146048 10242047 4096000 2G 83 Linux
```

- b) The RAID 2 will be a Mirror RAID (or RAID 1), the partitions sdb2 and sdc2 are identical

c)      sudo mdadm -Cv /dev/md2 -l1 -n2 /dev/sdb2 /dev/sdc2

- md2: Identification number of Raid (you can use an other number)
  - -l1: Raid 1 or Mirror
  - -n2: RAID composed by 2 HDD
  - /dev/sdb2 /dev/sdc2: Partitions sdb2, sdc2

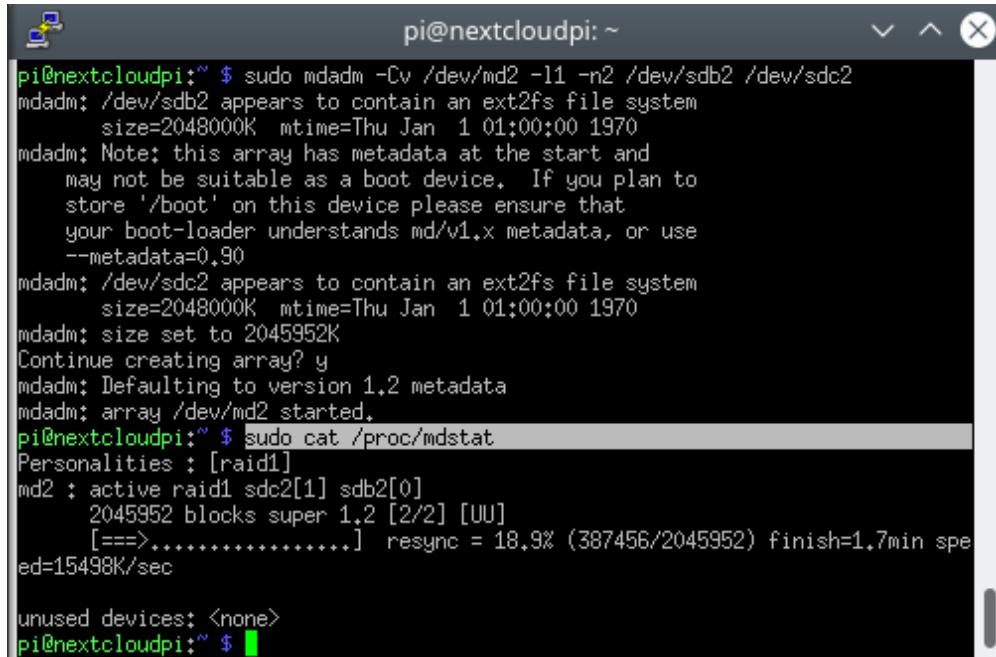


```
pi@nextcloudpi: ~
Disk /dev/sdc: 115.7 GiB, 124218507264 bytes, 242614272 sectors
Disk model: Ultra
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x0c801133

Device Boot Start End Sectors Size Id Type
/dev/sdc1 2048 2050047 2048000 1000M 83 Linux
/dev/sdc2 2050048 6146047 4096000 2G 83 Linux
/dev/sdc3 6146048 10242047 4096000 2G 83 Linux
pi@nextcloudpi:~$ sudo mdadm -Cv /dev/md2 -l1 -n2 /dev/sdb2 /dev/sdc2
mdadm: /dev/sdb2 appears to contain an ext2fs file system
 size=2048000K mtime=Thu Jan 1 01:00:00 1970
mdadm: Note: this array has metadata at the start and
 may not be suitable as a boot device. If you plan to
 store '/boot' on this device please ensure that
 your boot-loader understands md/v1.x metadata, or use
 --metadata=0.90
mdadm: /dev/sdc2 appears to contain an ext2fs file system
 size=2048000K mtime=Thu Jan 1 01:00:00 1970
mdadm: size set to 2045952K
Continue creating array? y
```

- Answer “y” to the question “Continue creating array?”
- The synchronization between HDDs, can take many time. If you lost the connection through putty, you can just reload putty and you can see the synchronization progression with the follow code:

- `sudo cat /proc/mdstat`



```
pi@nextcloudpi: ~
pi@nextcloudpi:~$ sudo mdadm -Cv /dev/md2 -l1 -n2 /dev/sdb2 /dev/sdc2
mdadm: /dev/sdb2 appears to contain an ext2fs file system
 size=2048000K mtime=Thu Jan 1 01:00:00 1970
mdadm: Note: this array has metadata at the start and
 may not be suitable as a boot device. If you plan to
 store '/boot' on this device please ensure that
 your boot-loader understands md/v1.x metadata, or use
 --metadata=0.90
mdadm: /dev/sdc2 appears to contain an ext2fs file system
 size=2048000K mtime=Thu Jan 1 01:00:00 1970
mdadm: size set to 2045952K
Continue creating array? y
mdadm: Defaulting to version 1.2 metadata
mdadm: array /dev/md2 started.
pi@nextcloudpi:~$ sudo cat /proc/mdstat
Personalities : [raid1]
md2 : active raid1 sdc2[1] sdb2[0]
 2045952 blocks super 1,2 [2/2] [UU]
 [==>.....] resync = 18.9% (387456/2045952) finish=1.7min spe
ed=15498K/sec

unused devices: <none>
pi@nextcloudpi:~$
```

d) Similar to RAID 2, the RAID 5 with the partitions sda1, sdb1 and sdc1 (see, [en.wikipedia.org/wiki/RAID](https://en.wikipedia.org/wiki/RAID))

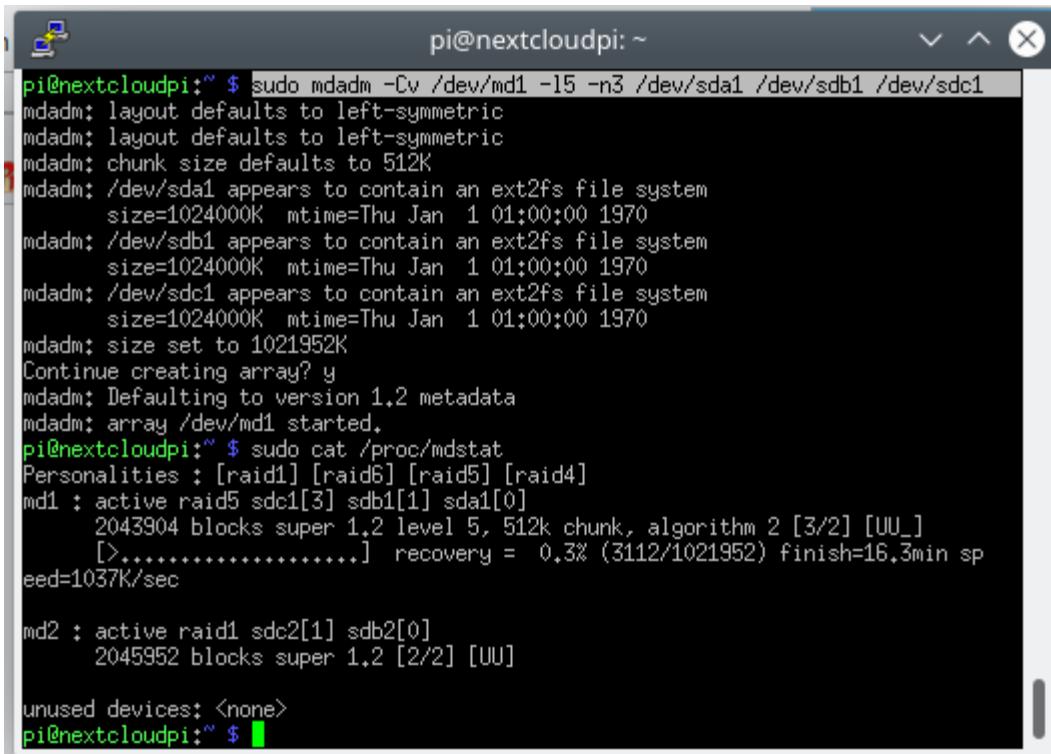
e) `sudo mdadm -Cv /dev/md1 -l5 -n3 /dev/sda1 /dev/sdb1 /dev/sdc1`

- `md1`: Identification number of Raid (you can use an other number)

- `-l5` : Raid 5

- `-n3` : RAID composed by 3 HDDs

- `/dev/sda1 /dev/sdb1 /dev/sdc1` : Partitions sda, sdb1, sdc1.



The screenshot shows a terminal window titled "pi@nextcloudpi: ~". The terminal displays the command `sudo mdadm -Cv /dev/md1 -l5 -n3 /dev/sda1 /dev/sdb1 /dev/sdc1` being run. The output shows the process of creating the array, including the detection of ext2fs file systems on the individual drives and the creation of a left-symmetric RAID 5 array. It also shows the output of `cat /proc/mdstat`, which details the array's metadata and current status, including recovery progress and speed information. The terminal ends with a prompt `pi@nextcloudpi: ~ $`.

```
pi@nextcloudpi:~ $ sudo mdadm -Cv /dev/md1 -l5 -n3 /dev/sda1 /dev/sdb1 /dev/sdc1
mdadm: layout defaults to left-symmetric
mdadm: layout defaults to left-symmetric
mdadm: chunk size defaults to 512K
mdadm: /dev/sda1 appears to contain an ext2fs file system
 size=1024000K mtime=Thu Jan 1 01:00:00 1970
mdadm: /dev/sdb1 appears to contain an ext2fs file system
 size=1024000K mtime=Thu Jan 1 01:00:00 1970
mdadm: /dev/sdc1 appears to contain an ext2fs file system
 size=1024000K mtime=Thu Jan 1 01:00:00 1970
mdadm: size set to 1021952K
Continue creating array? y
mdadm: Defaulting to version 1.2 metadata
mdadm: array /dev/md1 started.
pi@nextcloudpi:~ $ sudo cat /proc/mdstat
Personalities : [raid1] [raid6] [raid5] [raid4]
md1 : active raid5 sdc1[3] sdb1[1] sda1[0]
 2043904 blocks super 1.2 level 5, 512k chunk, algorithm 2 [3/2] [UU_]
 [>.....] recovery = 0.3% (3112/1021952) finish=16.3min speed=1037K/sec

md2 : active raid1 sdc2[1] sdb2[0]
 2045952 blocks super 1.2 [2/2] [UU]

unused devices: <none>
pi@nextcloudpi:~ $
```

## Create a unique volume with all RAIDs (LVM)

5. **WHEN THE SYNCHRONIZATION FINISHES**, Create the Physical Volume (PV)

- a)      sudo pvcreate /dev/md1 /dev/md2
  - md1: Identification number of Raid (you can use an other number)
- b)      sudo pvdisplay

The screenshot shows a terminal window titled "pi@nextcloudpi: ~". The terminal displays the following command-line session:

```
pi@nextcloudpi:~ $ sudo pvcreate /dev/md1 /dev/md2
Physical volume "/dev/md1" successfully created.
Physical volume "/dev/md2" successfully created.
pi@nextcloudpi:~ $ ev/mdi2
-bash: ev/mdi2: No such file or directory
pi@nextcloudpi:~ $ sudo pvdisplay
"/dev/md1" is a new physical volume of "<1.95 GiB"
--- NEW Physical volume ---
PV Name /dev/md1
VG Name
PV Size <1.95 GiB
Allocatable NO
PE Size 0
Total PE 0
Free PE 0
Allocated PE 0
PV UUID TYqSQx-Xyij-w3FC-mcld-crru-7foJ-DaKNqB

"/dev/md2" is a new physical volume of "1.95 GiB"
--- NEW Physical volume ---
PV Name /dev/md2
VG Name
PV Size 1.95 GiB
Allocatable NO
PE Size 0
Total PE 0
Free PE 0
Allocated PE 0
PV UUID gBPKni-jbHH-T1PD-3iu2-Cakb-qcjb-C7Y8kg
```

6. Create the Volume Group (VG) in LVGraid

- a)    sudo vgcreate **LVGraid** /dev/md1 /dev/md2
  - mdx: Identification number of Raid (you can use an other number)
  - **LVGraid**: Name of Volume Groupe (VG)
  - **VG Side**: Memory available (3,89Gb in our exemple)
- b)    sudo vgdisplay

```
pi@nextcloudpi:~ $ sudo vgcreate LVGraid /dev/md1 /dev/md2
 Volume group "LVGraid" successfully created
pi@nextcloudpi:~ $ sudo pvcreate /dev/md1 /dev/md2
 Can't initialize physical volume "/dev/md1" of volume group "LVGraid" without
 -ff
 /dev/md1: physical volume not initialized.
 Can't initialize physical volume "/dev/md2" of volume group "LVGraid" without
 -ff
 /dev/md2: physical volume not initialized.
pi@nextcloudpi:~ $
pi@nextcloudpi:~ $ sudo vgdisplay
 --- Volume group ---
 VG Name LVGraid
 System ID
 Format lvm2
 Metadata Areas 2
 Metadata Sequence No 1
 VG Access read/write
 VG Status resizable
 MAX LV 0
 Cur LV 0
 Open LV 0
 Max PV 0
 Cur PV 2
 Act PV 2
 VG Size 3.89 GiB
 PE Size 4.00 MiB
 Total PE 997
 Alloc PE / Size 0 / 0
 Free PE / Size 997 / 3.89 GiB
 VG UUID y5gJIp-xUBo-iJ9L-7fHU-DOGu-dqVQ-KBAAIi
pi@nextcloudpi:~ $
```

7. Create the logical volumes (LV) in LVMraid

a) `sudo lvcreate -l 100%FREE -n LVMraid LVGraid`

- **100%FREE**: All memory available (3,89Gb in our exemple)

- **LVGraid**: Name of Volume Groupe (VG)

- **LVMraid**: Name of Logical Volume (LV)

- **/dev/LVGraid/LVMraid**: Address where the Logical Volume (LV)

b) `sudo lvdisplay`

```
pi@nextcloudpi:~ $ sudo lvcreate -l 100%FREE -n LVMraid LVGraid
Logical volume "LVMraid" created.
pi@nextcloudpi:~ $ sudo lvdisplay
--- Logical volume ---
 LV Path /dev/LVGraid/LVMraid
 LV Name LVMraid
 VG Name LVGraid
 LV UUID INKuaX-YU5M-oIsk-UAcB-jLs3-Hj17-LiG0jV
 LV Write Access read/write
 LV Creation host, time nextcloudpi, 2020-02-16 19:16:57 +0000
 LV Status available
 # open 0
 LV Size 3.89 GiB
 Current LE 997
 Segments 2
 Allocation inherit
 Read ahead sectors auto
 - currently set to 256
 Block device 253:0

pi@nextcloudpi:~ $
```

8. Format Logical Volume (LV) to **BTRFS**

- `sudo mkfs -t btrfs -f /dev/LVGraid/LVMraid`

```
pi@nextcloudpi:~ $ sudo mkfs -t btrfs -f /dev/LVGraid/LVMraid
btrfs-progs v4.20.1
See http://btrfs.wiki.kernel.org for more information.

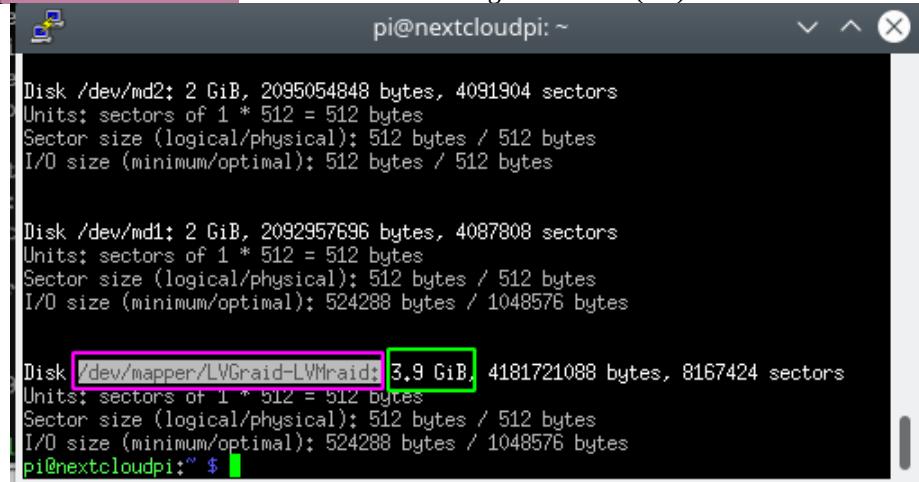
Label: (null)
UUID: 0e9a64e3-0827-4d50-baa5-908be3559e9a
Node size: 16384
Sector size: 4096
Filesystem size: 3.89GiB
Block group profiles:
 Data: single 8.00MiB
 Metadata: DUP 199.38MiB
 System: DUP 8.00MiB
SSD detected: no
Incompat features: extref, skinny-metadata
Number of devices: 1
Devices:
 ID SIZE PATH
 1 3.89GiB /dev/LVGraid/LVMraid

pi@nextcloudpi:~ $
```

9. See the Logical Volume (LV)

a) sudo fdisk -l

- /dev/mapper/LVGraid-LVMraido: Address where the Logical Volume (LV) is mounted



```
pi@nextcloudpi: ~
Disk /dev/md2: 2 GiB, 2095054848 bytes, 4091904 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes

Disk /dev/md1: 2 GiB, 2092957696 bytes, 4087808 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 524288 bytes / 1048576 bytes

Disk /dev/mapper/LVGraid-LVMraido: 3.9 GiB, 4181721088 bytes, 8167424 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 524288 bytes / 1048576 bytes
pi@nextcloudpi: $
```

10. Create the folder where your data will be stored

a) cd /

b) sudo mkdir /RAID

c) cd /RAID

d) sudo mount /dev/mapper/LVGraid-LVMraido /RAID

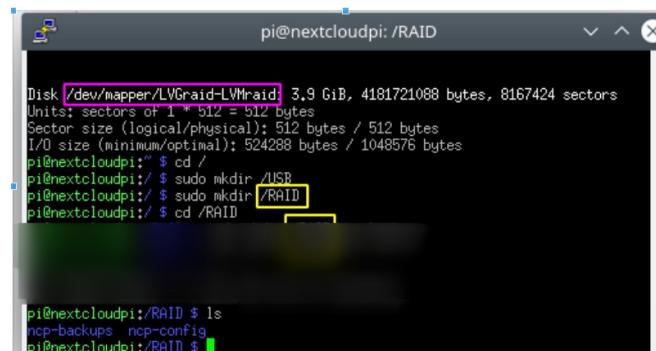
- /dev/mapper/LVGraid-LVMraido: Address where the Logical Volume (LV) is mounted

- /RAID: Address where Logical Volume (LV) will be mounted

11. sudo mkdir ncp-database

12. Create others useful folders

a) sudo mkdir /USB

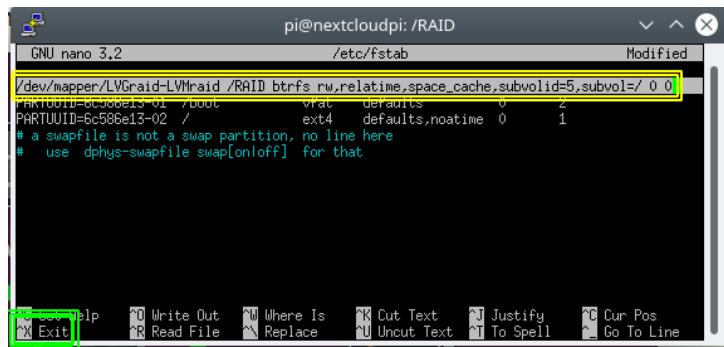


```
pi@nextcloudpi: /RAID
pi@nextcloudpi: ~
Disk /dev/mapper/LVGraid-LVMraido: 3.9 GiB, 4181721088 bytes, 8167424 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 524288 bytes / 1048576 bytes
pi@nextcloudpi: $ cd /
pi@nextcloudpi:/ $ sudo mkdir /USB
pi@nextcloudpi:/ $ sudo mkdir /RAID
pi@nextcloudpi:/ $ cd /RAID
pi@nextcloudpi:/RAID $ ls
ncp-backups ncp-config
pi@nextcloudpi:/RAID $
```

13. Mount Logical Volume (LV) in the /RAID folder

a) sudo nano /etc/fstab

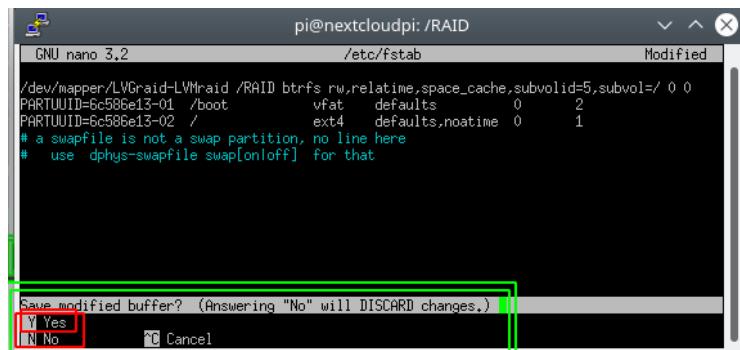
- b) Write : /dev/mapper/LVGraid-LVMraids /RAID btrfs  
 rw,relatime,space\_cache,subvol=5,subvol=/ 0 0



```
pi@nextcloudpi: /RAID
GNU nano 3.2 /etc/fstab Modified
/dev/mapper/LVGraid-LVMraids /RAID btrfs rw,relatime,space_cache,subvol=5,subvol=/ 0 0
PARTUUID=6c586e13-01 /boot vfat defaults 0 2
PARTUUID=6c586e13-02 / ext4 defaults,noatime 0 1
a swapfile is not a swap partition, no line here
use dphys-swapfile swap[on/off] for that
```

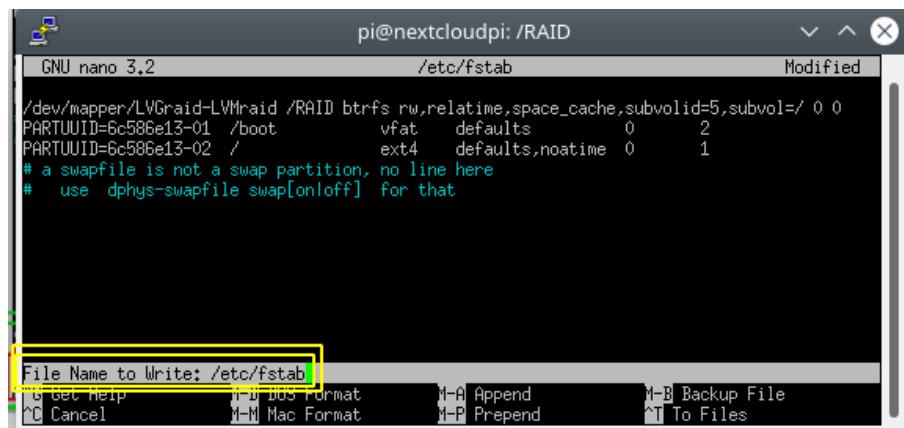
- c) Exit phusing:

- **Crtl + X**



- d) Save the changes (pushing Y) in the address folder: /etc/fstab (pushing Enter)

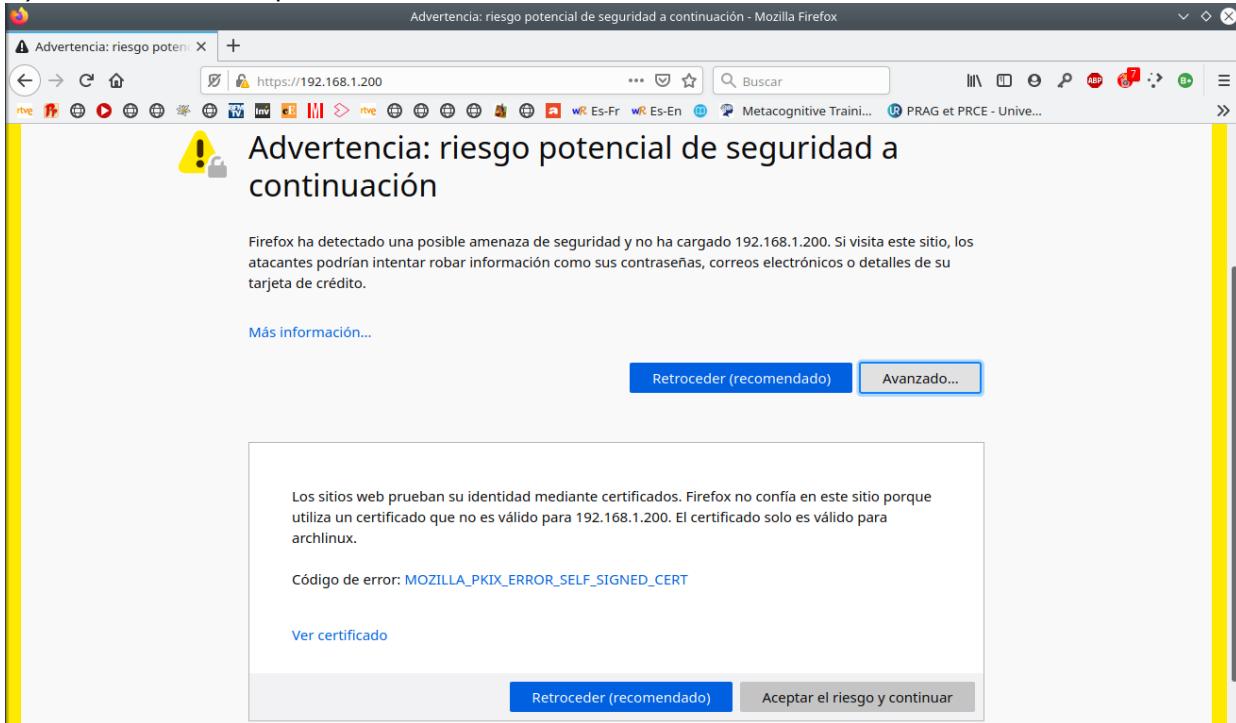
- **Y**
- **Enter**



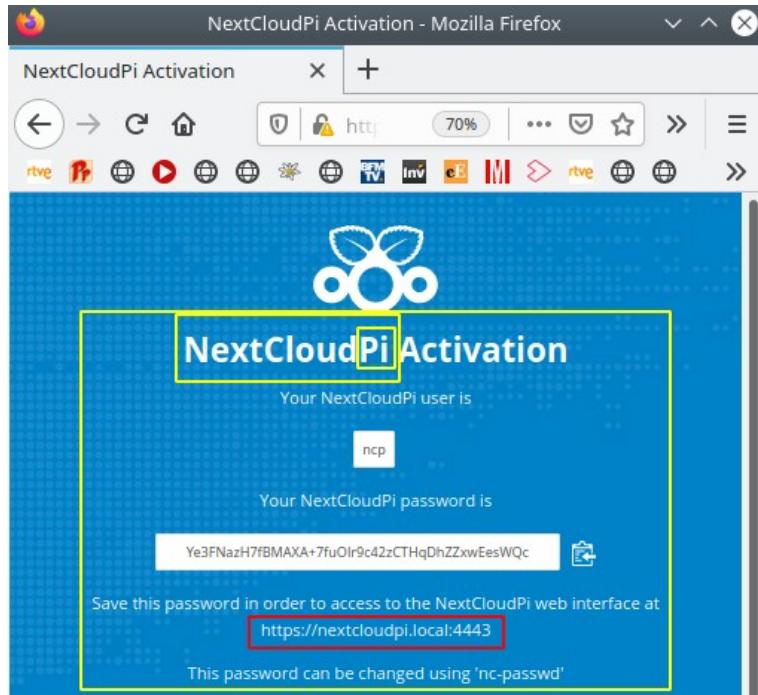
# Install NextcloudPi

1. Go the IP address of RaspberryPi previously fixed (see page 6) with firefox (or another)

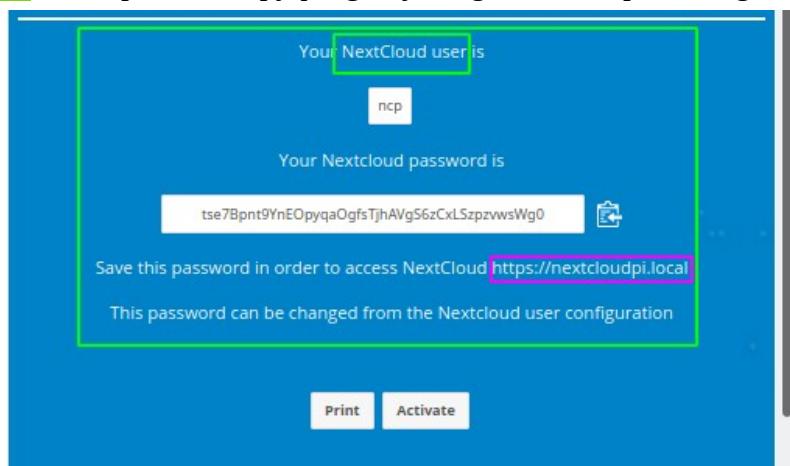
- a) <https://192.168.1.200/>
- b) Push "avanced"
- c) Push "accept the risk"



2. Print all information
3. Copy the Id and the Password of **NextcloudPi count** into a bloc text:
  - a) **Address:** <https://nextcloudpi.local:4443>
  - b) **Id:** ncp
  - c) **Password:** Ye3FNazH7fBMAXA+7fuOlr9c42zCTHqDhZZxwEesWQc

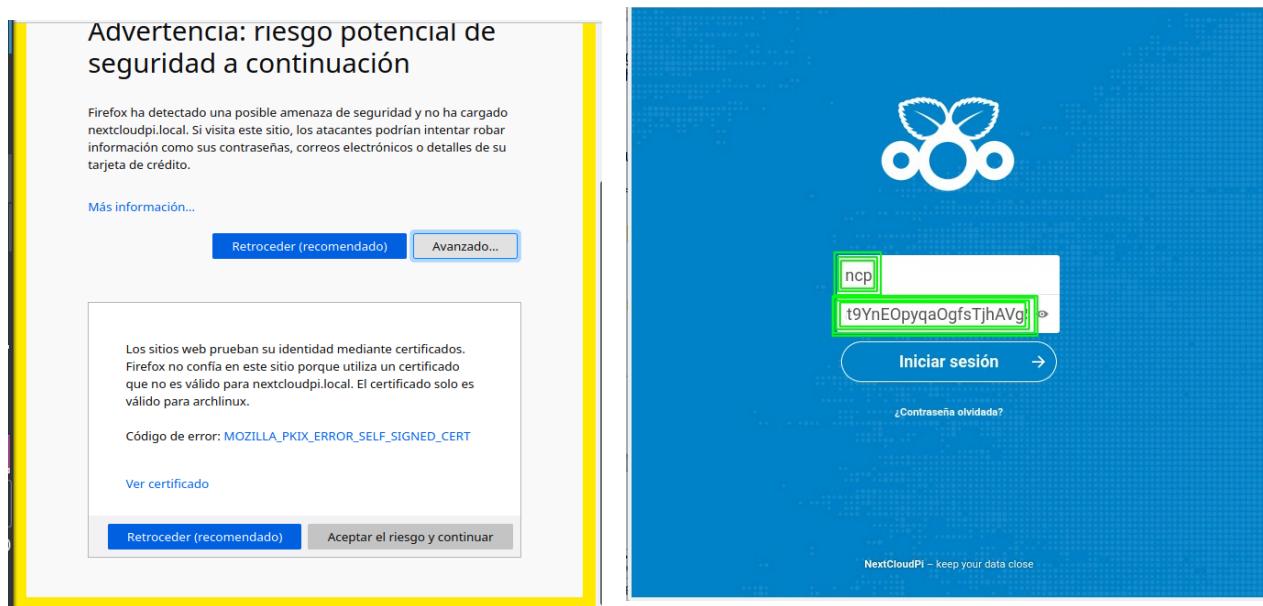


4. Copy the Id and the Password of **Nextcloud count** into a bloc text:
  - a) **Address:** <https://nextcloudpi.local>
  - b) **Id:** ncp
  - c) **Password:** tse7Bpnt9YnEOpyqaOgfsTjhAVgS6zCxLSzpzwswsWg0

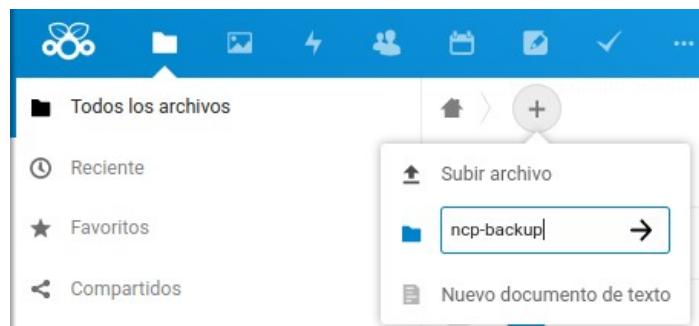


# Configuracion Nextcloud

1. Active the **NextcloudPi count** and the **Nextcloud count**
  - a) Push “Active”
2. Open Nextcloud
  - a) **Address:** <https://nextcloudpi.local>
3. The first time that you will open the **Nextcloud count**, you need to accept the risk again:
  - a) Push “avanced”
  - b) Push “accept the risk”



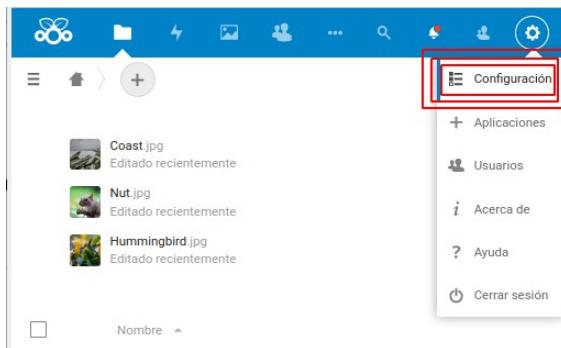
4. The Id and the password come from the previous windows below
  - a) **Id:** ncp
  - b) **Password:** tse7Bpnt9YnEOpyqaOgfsTjhAVgS6zCxLSzpzzwsWg0
5. After some minutes (only the first time), you can close the welcome windows
6. Create a new folder “ncp-backup”, where all backups of NextcloudPi will be stored



## 7. Change the password

- a) Go to “Configuration” → “Personal” → “Security”

- “Old password”: tse7Bpnt9YnE0pyqa0gfsTjhAVgS6zCxLSzpzwvwsWg0
- “Password”: **1+1+2+3+5+8+13+21+34**
- Push “save”



## 8. Mail configuration

- a) Firstly, it's necessary to allow “less secure apps” to sing in to your gmail:

- <https://support.google.com/accounts/answer/6010255?hl=en>
- <https://myaccount.google.com/intro/security>

- b) Go to “Configuration” → “Administration” → “Basic setting” → “Email server”

- “send mode”: SMTP
- “Encryption”: SSL/TLS
- “From address”: [MAIL@gmail.com](mailto:MAIL@gmail.com)
- “Authentication method”: Login
- “Authentication required”: Activated
- “Server address”: smtp.gmail.com
- “port”: 587 (o 465)
- “Credentials”: MAIL (without @gmail.com)
- “Password”: Password of your eMail

Servidor de correo electrónico i

Es importante configurar este servidor para que pueda enviar correos, por ejemplo para cambios de contraseña y notificaciones.

Modo de envío: **SMTP** Cifrado: **SSL/TLS**

Desde la dirección: **MAIL** @ **gmail.com**

Método de autenticación: **Iniciar sesión**  Se necesita autenticación

Dirección del servidor: **smtp.gmail.com** : **465**

Credenciales: **MAIL** **Password du MAIL** **Guardar**

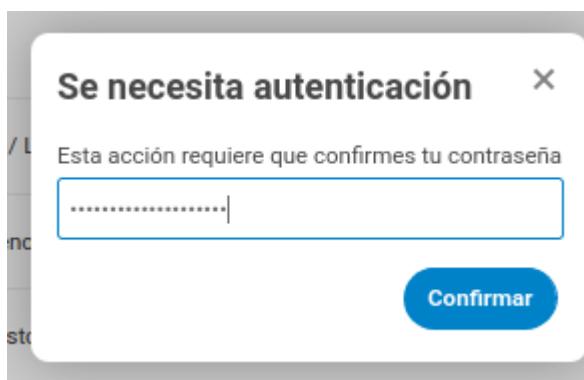
[Probar configuración de correo electrónico](#) [Enviar mensaje](#)

## 9. Active USB external memory

- a) Go to “Applications” → “Administration” → “External storage support” → “Active”

The screenshot shows the Nextcloud administration interface under the 'Tus apps' section. The 'External storage support' application is listed with a version of 1.8.0 and is marked as 'Oficial'. A red box highlights both the application name and its activation button. Other applications listed include 'Update notification', 'Usage survey', 'Versions', 'Video player', 'Viewer', 'Auditing / Logging', 'Default encryption module', and 'LDAP user and group backend'. The sidebar on the left includes links for 'Apps activas', 'Apps deshabilitadas', 'Lotes de apps', 'Personalización', 'Archivos', 'Juegos', 'Integración', 'Monitorización', 'Multimedia', and 'Oficina y texto'. The top right corner features a user profile icon with a red 'N' badge.

- b) Write the Nextcloud Password



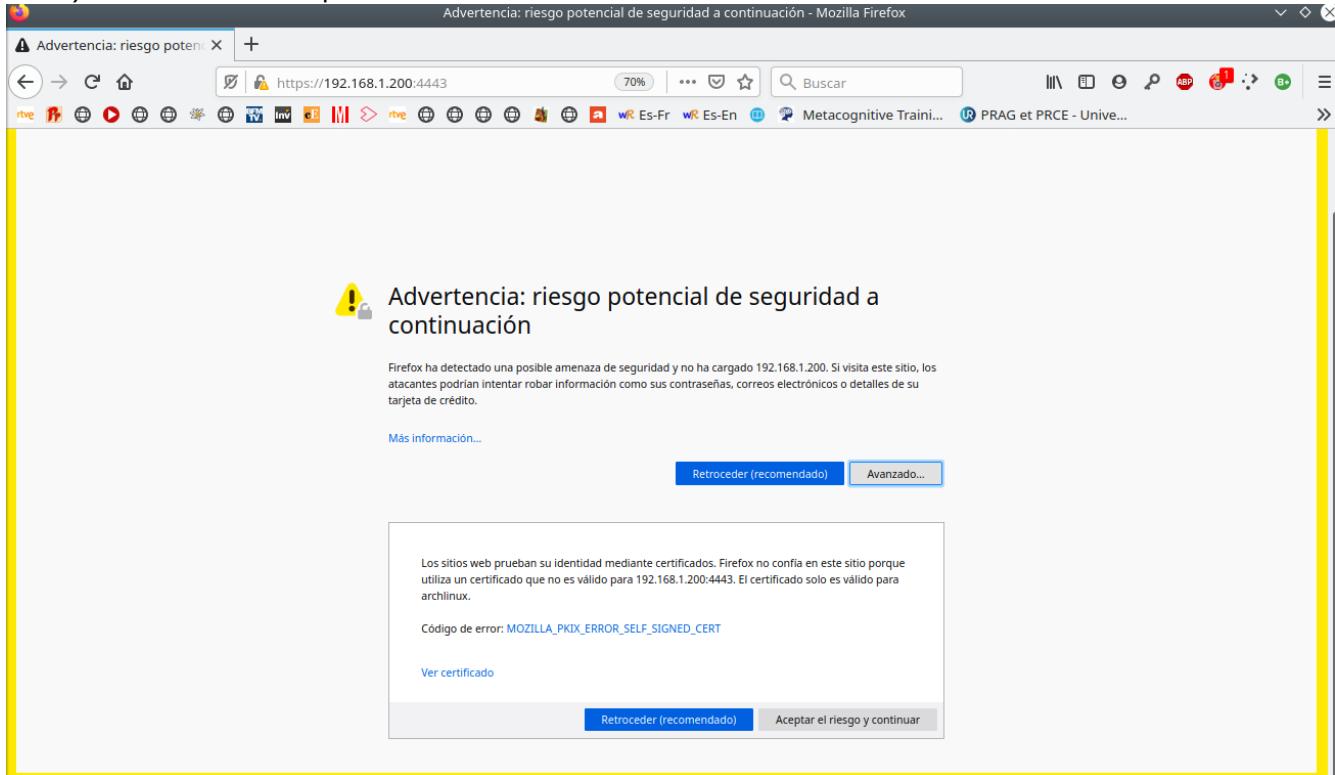
- c) Go to “Configuration” → “Your apps” → “External storage support” → “External storage”

The screenshot shows the Nextcloud configuration interface under the 'Almacenamiento externo' section. A red box highlights the 'Nombre de la carpeta' (Name of the folder) input field containing 'USB', the 'Almacenamiento externo' (External storage) dropdown set to 'Local', and the 'Disponible para' (Available for) dropdown set to '/media'. The 'Autentificación' (Authentication) dropdown is set to 'Ninguno'. Below these fields are 'Nombre de la carpeta' and 'Añadir almacenar' buttons, and a checkbox for 'Permitir a los usuarios montar un almacenamiento externo' (Allow users to mount an external storage). The sidebar on the left includes links for 'Vista general', 'Ajustes básicos', 'Soporte', 'Compartir', 'Seguridad', 'Almacenamiento externo' (which is selected and highlighted with a blue bar), and 'Noticias'.

# NextcloudPi Configuration - "CONFIG MENU"

- The first time that you will open the NextcloudPi count, you need to accept the risk again:

- Address: <https://nextcloudpi.local:4443>
- Push "avanced"
- Push "accept the risk"



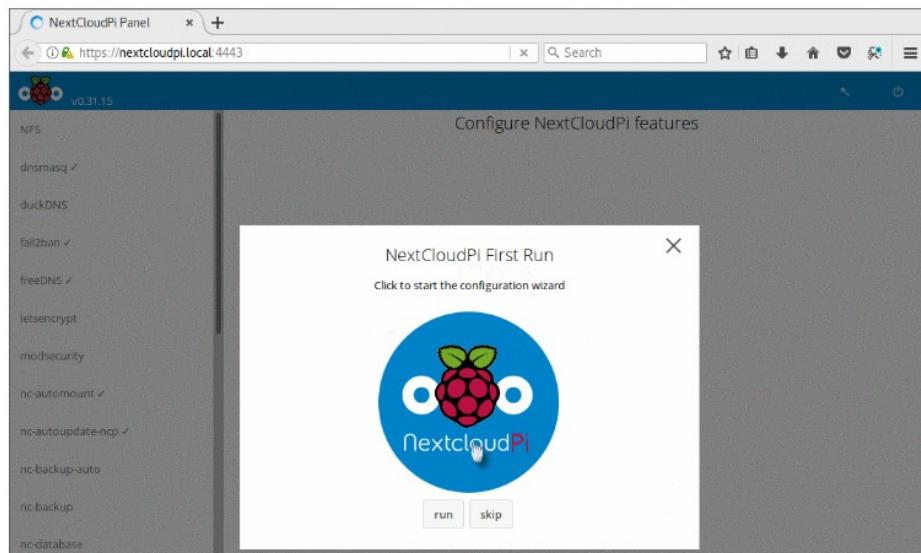
- You have to write your Id and your Password from the NextcloudPi count

- Id:** ncp
- Password:** Ye3FNazH7fBMAXA+7fuOlr9c42zCTHqDhZZxwEesWQc

A screenshot of a Mozilla Firefox browser window. The title bar says "NextCloudPi Activation - Mozilla Firefox". The main content area displays the "NextCloudPi Activation" page, which shows the user's ID as "ncp" and the password as "Ye3FNazH7fBMAXA+7fuOlr9c42zCTHqDhZZxwEesWQc". Below this, it says "Save this password in order to access to the NextCloudPi web interface at https://nextcloudpi.local:4443". At the bottom, it says "This password can be changed using 'nc-passwd'". To the left of the main content, there is a smaller window titled "Identificación requerida" with a login form. The URL in the address bar is https://nextcloudpi.local:4443. The login form has fields for "Nombre de usuario:" containing "ncp" and "Contraseña:" containing a masked password. There is also a "Cancelar" button.

1. The fist time, you will see a windows as below.

- a) Push “skip”



2. Change the Nextcloud database location (it's like a “List of documents”). **Without the “List of documents”, Nextcloud will not recognizance your documents stored in the RAID, even if they are stored in the RAID.**

- a) Go to “CONFIG” → “Nc-database”

- “Database directory”: `/RAID/ncp-database`

v1.19.1 auto

Move your database to a new location, like a USB drive

Note that non Unix filesystems such as NTFS are not supported because they do not provide a compatible user/permissions system.

You need to use a USB drive that is permanently on and is responsive or the database will fail.

Please note that the default location, when first installed is `/var/lib/mysql/`. Move it to the desired location by editing the `DBDIR=` field, the one shown is an example.

\*\* If it ever fails with a white page, move the database back to the SD \*\*

Database directory `/RAID/ncp-database` path doesn't exist

Apply

[ nc-database ]  
Maintenance mode enabled  
moving database to /RAID/ncp-database...  
Maintenance mode disabled

3. Change the data folder location of Nextcloud (photos, videos, documents,...)

a) Go to “CONFIG” → “nc-datadir”

- “Data directory”: `/RAID/ncp-data`

The screenshot shows the NextcloudPi configuration interface. On the left, there's a sidebar with various configuration items like nc-snapshot, nc-admin, nc-database, nc-datadir, nc-httpsonly, nc-init, nc-limits, nc-nextcloud, nc-passwd, nc-prettyURL, nc-previews-auto, and nc-scan-auto. The 'nc-datadir' item is selected and expanded. The main panel has a title "Change your data dir to a new location, like a USB or SATA drive". It contains notes about non-Unix filesystems like NTFS not being supported because they lack a compatible user/permissions system. It also notes that the default location is /var/www/nextcloud/data and suggests moving it to /RAID/ncp-data. A text input field shows the path "/RAID/ncp-data" with a red error message "path doesn't exist". Below the input is an "Apply" button. To the right of the input field, there's a log window showing maintenance mode enabled, data directory moved, BTRFS detected, and subvolume created. It also mentions Nextcloud is in maintenance mode with no apps loaded. The log continues with system config values for tempdirectory, datadirectory, and logfile, all set to /RAID/ncp-data. Finally, it shows maintenance mode disabled.

4. Change password for admin user **ncp** for NextcloudPi coutn at localhost:4443

a) Go to “CONFIG” → “nc-passwd”

- “Password”: **1+1+2+3+5+8+13+21+34**
- “Confirm password”: **1+1+2+3+5+8+13+21+34**
- The symbols are not allowed

The screenshot shows the NextcloudPi configuration interface. The sidebar includes nc-init, nc-limits, nc-nextcloud, nc-passwd, nc-prettyURL, nc-previews-auto, and nc-scan-auto. The 'nc-passwd' item is selected. The main panel has a title "Change password for the NextCloudPi Panel". It includes a note that some special characters are not allowed in passwords. There are two input fields: "Password" containing "1+1+2+3+5+8+13+21+34" and "Confirm password" also containing "1+1+2+3+5+8+13+21+34". Below the inputs is an "Apply" button. To the right is a log window showing the password update process. It indicates the password was updated successfully, the site ncp was already enabled, and the site nextcloud was already enabled. It also mentioned that site ncp-activation was already disabled.

5. Change maximum file size

- a) Go to “CONFIG” → “nc-limits”  
• “Maximum file size” : 0 (ilimited)

The screenshot shows the NextCloudPi configuration interface with the "CONFIG" tab selected. Under the "nc-limits" section, there are four input fields: "Maximum file size" (set to 0), "Memory limit" (set to 0), "PHP threads" (set to 0), and "Redis memory" (set to 0). An "Apply" button is located at the bottom right of the form.

6. Periodically scan of new files

- a) Go to “CONFIG” → “nc-scan-auto”  
• “Scan periodicity (in minutes)”: 300  
• “Path”: /ncp/files/ncp-backup  
• Push “Apply”

The screenshot shows the NextCloudPi configuration interface with the "CONFIG" tab selected. Under the "nc-scan-auto" section, several options are available: "Active" (checked), "Recursive" (checked), "Ignore external files" (unchecked), "Scan periodicity (in minutes)" (set to 120), and three "Path" fields containing "/ncp/files/Documents/ncp-backup", "/family/files/Photos", and "/family/files/Videos". An "Apply" button is located at the bottom right of the form. A message box at the bottom indicates "[ nc-scan-auto ] automatic scans enabled".

7. Security option: Force secure connection using HTTPS

- a) Go to “CONFIG” → “nc-httpsonly”  
• Push “Apply”

The screenshot shows the NextCloudPi configuration interface with the "CONFIG" tab selected. Under the "nc-httpsonly" section, the "Active" checkbox is checked. An "Apply" button is located at the bottom right of the form. A message box at the bottom indicates "[ nc-httpsonly ] Forcing HTTPS On".

8. Periodically generate previews for the gallery

- a) Go to “CONFIG” → “nc-previews-auto”
- “Runtime (in minutes)” : 120
  - Push “Apply”

The screenshot shows the NextCloud configuration interface. On the left, there is a sidebar with several configuration items listed:

- nc-httpsonly ✓
- nc-init
- nc-limits
- nc-nextcloud
- nc-passwd
- nc-prettyURL
- nc-previews-auto ✓

The main area is titled "Periodically generate previews for the gallery". It contains the following text and controls:

This will make browsing the gallery much more smooth.  
For big collections, this can take a LONG time depending on your hardware.  
You can specify a nightly duration in minutes, or 0

Active

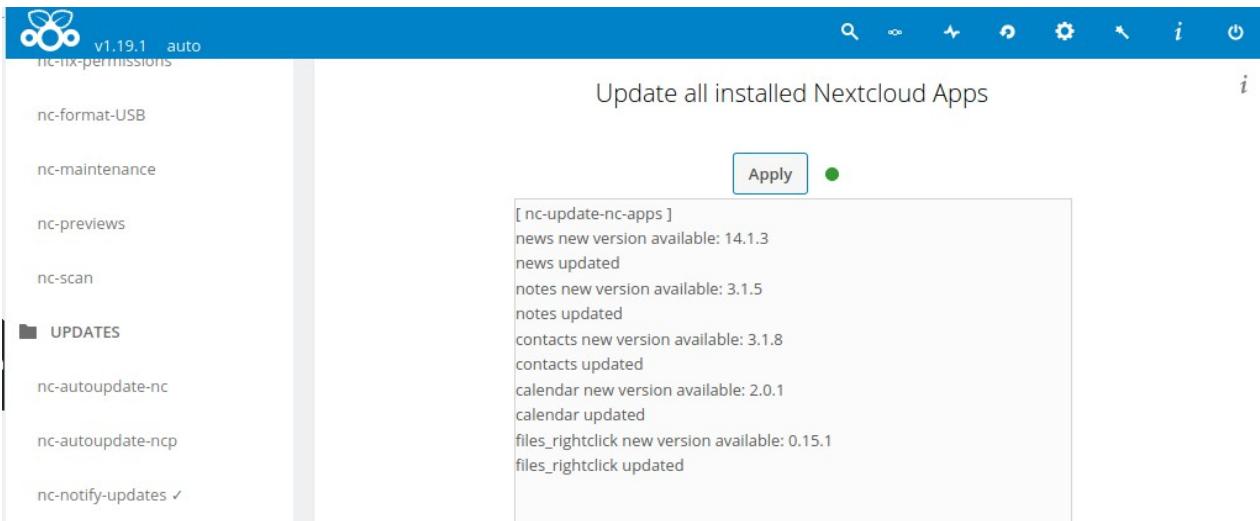
Runtime (in minutes)

**Apply** ●

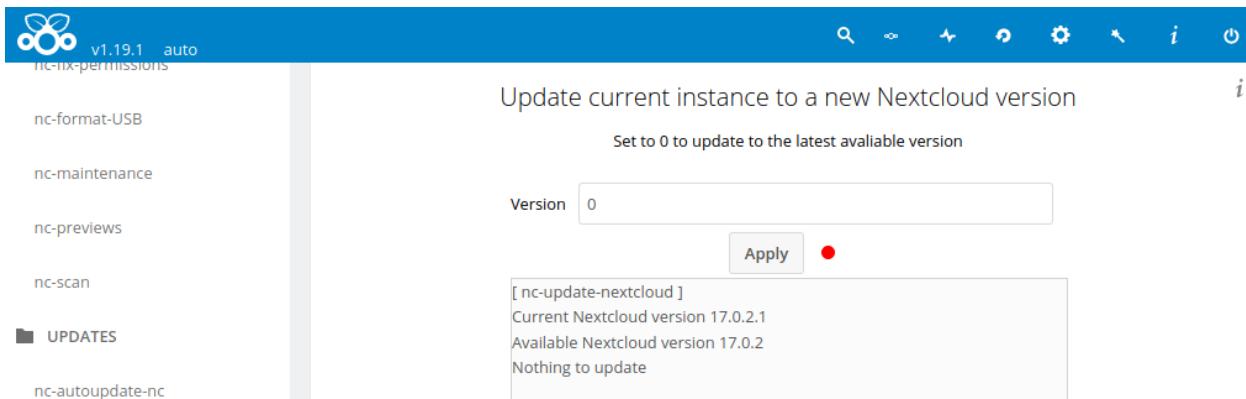
[ nc-previews-auto ]  
Automatic preview generation enabled

# NextcloudPi Configuration - “UPDATES MENU”

1. Update all Nextcloud Apps installed
  - a) Go to “UPDATES” → “nc-update-nc-apps”
    - Push “Apply”

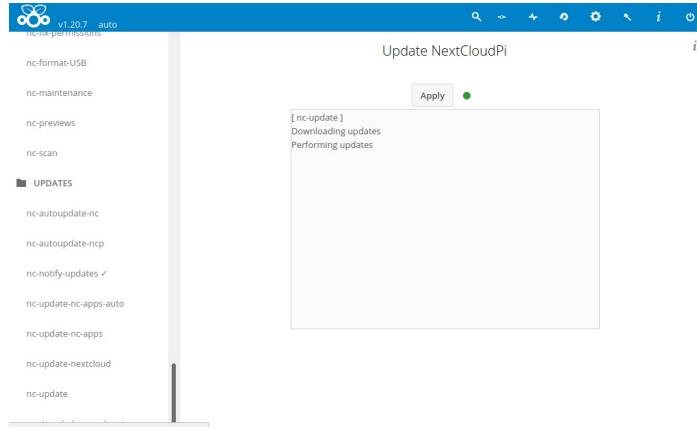


2. Update the Nextcloud version
  - a) Go to “UPDATES” → “nc-update-nextcloud”
    - Push “Apply”



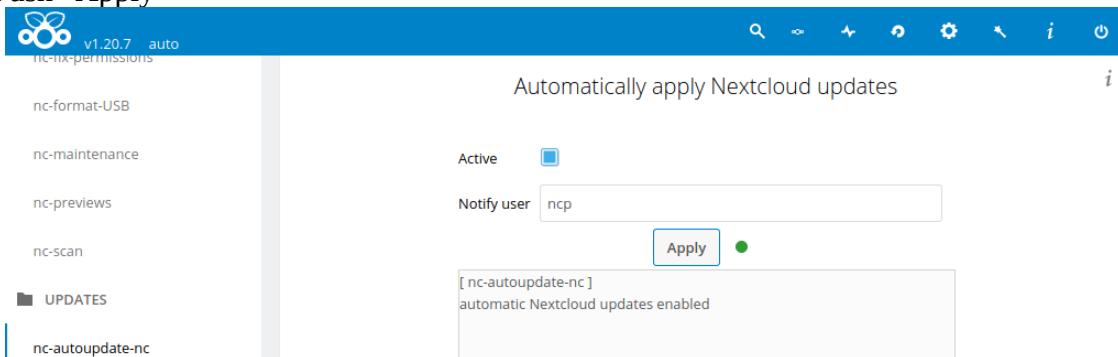
3. Perform a manual update of NextCloudPi

- a) Go to “UPDATES” → “nc-update”  
• Push “Apply”



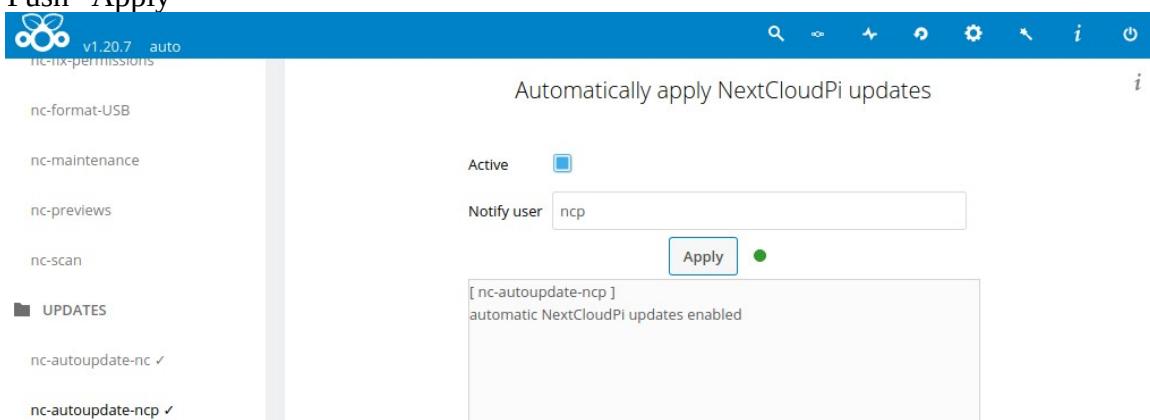
4. Automatically Nextcloud update

- a) Go to “UPDATE” → “nc-autoupdate-nc”  
• “Active”: Activate  
• “Notify user”: *ncp*  
• Push “Apply”



5. Automatically update NextCloudPi

- a) Go to “UPDATE” → “nc-autoupdate-ncp”  
• “Active”: Activate  
• “Notify user”: *ncp*  
• Push “Apply”



## 6. Periodically update all installed Nextcloud Apps

### a) Go to “UPDATE” → “nc-update-nc-apps-auto”

- “Active”: Activate
- “Notify user”: *ncp*
- Push “Apply”

The screenshot shows the 'nc-nx-permissions' interface with the title 'Periodically update all installed Nextcloud Apps'. On the left, there's a sidebar with a tree view under 'UPDATES' containing 'nc-autoupdate-nc', 'nc-autoupdate-ncp', 'nc-notify-updates', and 'nc-update-nc-apps-auto'. The main panel has two configuration sections. The first section, 'nc-update-nc-apps-auto', has 'Active' checked and 'Notify user' set to 'ncp'. The second section, '[ nc-update-nc-apps-auto ]', contains the message 'automatic app updates enabled'. At the bottom right is an 'Apply' button with a green dot indicating changes have been saved.

## 7. Enable Automatic installation of security updates to keep your cloud safe

### a) Go to “UPDATE” → “unattended-upgrades”

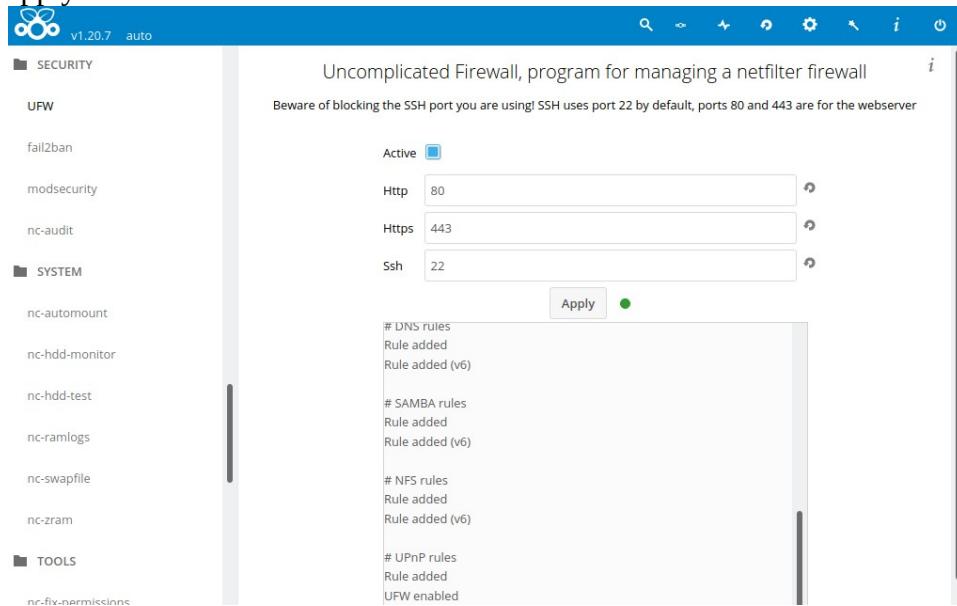
- “Active”: Activate
- “Autoreboot”: Activate
- Push “Apply”

The screenshot shows the 'nc-nx-permissions' interface with the title 'Automatic installation of security updates. Keep your cloud safe'. The sidebar shows 'nc-format-USB', 'nc-maintenance', 'nc-previews', and 'nc-scan'. Under 'UPDATES', it lists 'nc-autoupdate-nc', 'nc-autoupdate-ncp', 'nc-notify-updates', 'nc-update-nc-apps-auto', 'nc-update-nc-apps', 'nc-update-nextcloud', and 'unattended-upgrades'. The main panel shows 'nc-maintenance' with 'Active' checked and 'nc-previews' with 'Autoreboot' checked. A configuration box for '[ unattended-upgrades ]' displays the message 'Unattended upgrades active: yes (autoreboot true)'. An 'Apply' button with a green dot is at the bottom right.

# NextcloudPi Configuration - "SECURITY MENU"

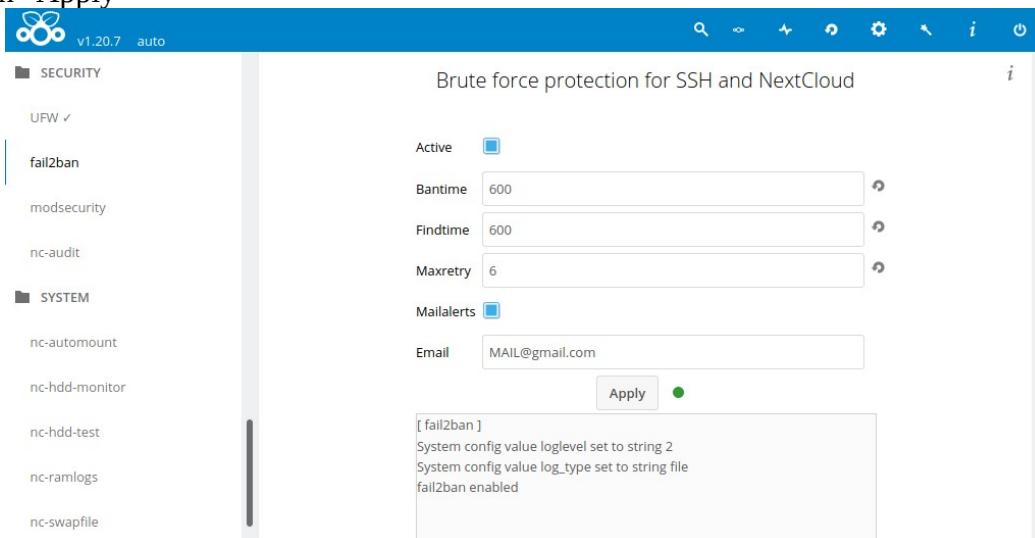
## 1. Activate Firewall (security)

- Go to "SECURITY" → "UFW"
  - "Active": Activate
  - Push "Apply"



## 2. Brute force protection (security)

- Go to "SECURITY" → "fail2ban"
  - "Active": Activate
  - "Bantime": **600**
  - "Findtime": **600**
  - "Maxretry": **6**
  - "Mailalerts": Activate
  - "Email": MAIL@gmail.com
    - After **6** wrong password in less than **600**, the system is blocked during **600** seconds.
  - Push "Apply"

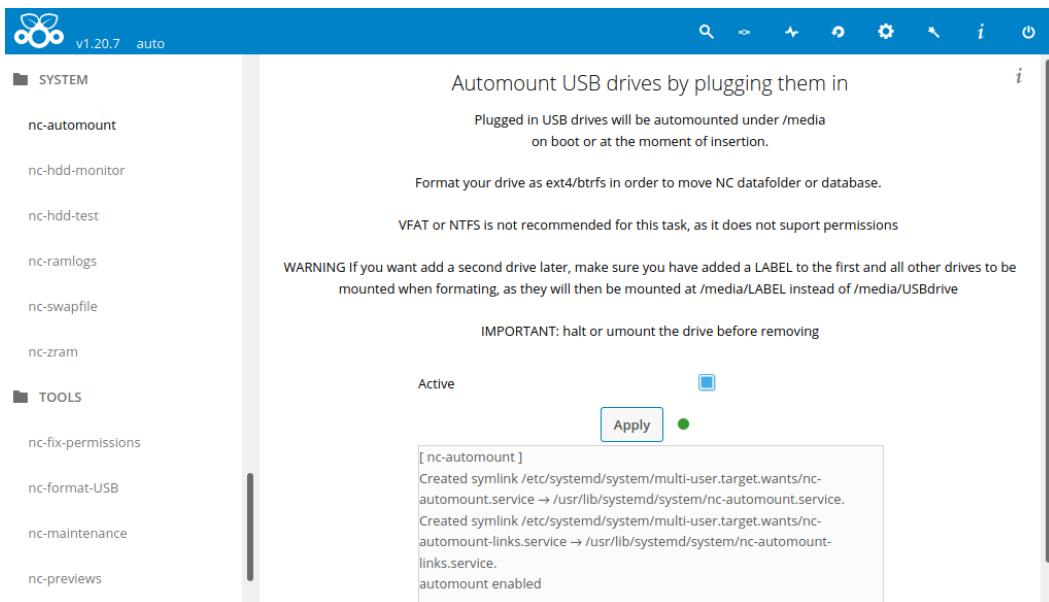


# NextcloudPi Configuration - “SYSTEM MENU”

## 1. Mount automatically the USB

### a) Go to “SYSTEM” → “nc-automount”

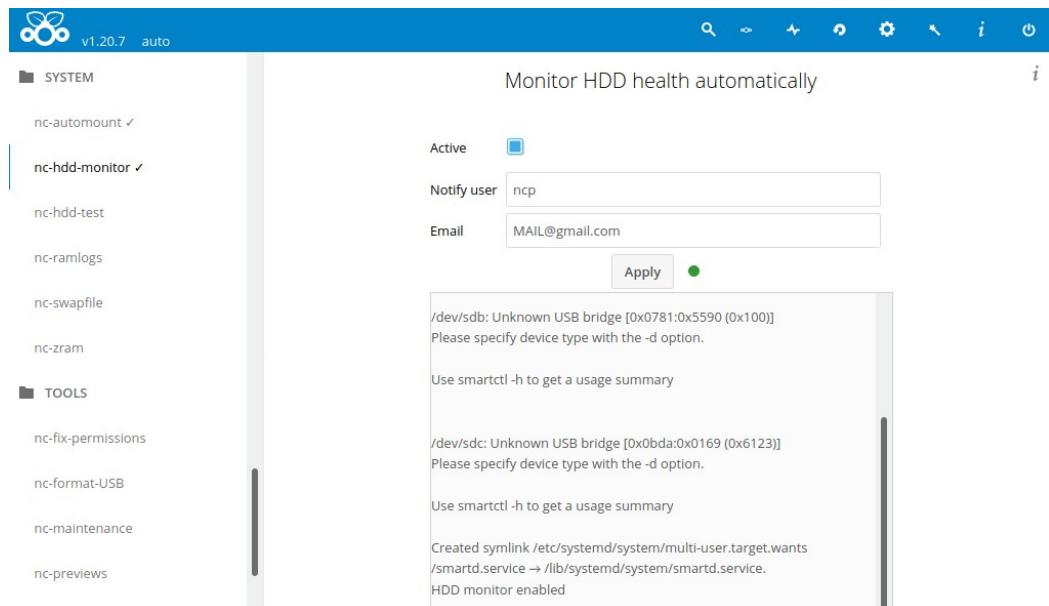
- “Active”: Activate
- Push “Apply”
- It will be mounted in: `/media`



## 2. Monitor HDD health automatically

### a) Go to “SYSTEM” → “nc-hdd-monitor”

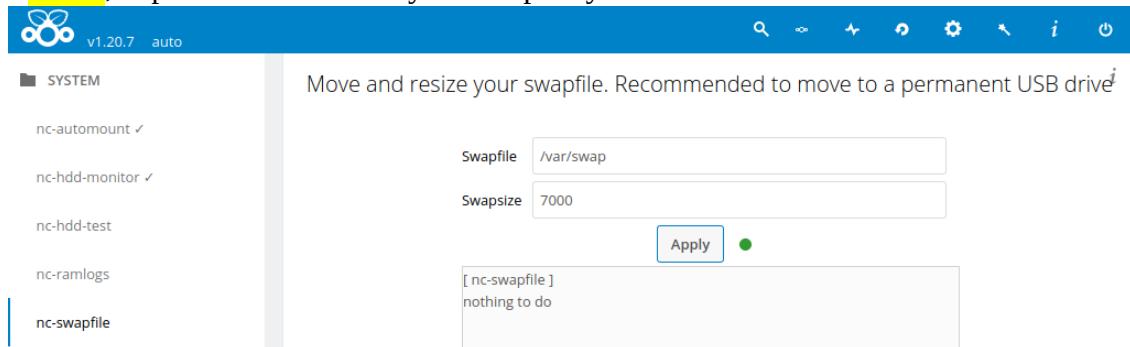
- “Active”: Activate
- “Notify user”: *ncp*
- “Email”: [MAIL@gmail.com](mailto:MAIL@gmail.com)
- Push “Apply”



3. Change the location and the size of the swap file (as RAM memory)

a) Go to “SYSTEM” → “nc-swapfile”

- Swapfile: **/var/swap**
- Swapsize: **7000**
- **7000**, depends of SD memory card capacity



# NextcloudPi Configuration - “BACKUPS MENU”

1. Perform the **first** manual backup of (a “List of documents”). **Without the “List of documents”, Nextcloud will not recognize your documents stored in the RAID, even if they are stored in the RAID.**

- Go to “BACKUPS” → “nc-snapshot”
  - “limit”: 30
  - It will be saved every hour in /RAID/ncp-snapshots

The screenshot shows the NextcloudPi configuration interface with the title "BACKUPS". On the left, there is a sidebar with options: nc-backup-auto (marked with a checkmark), nc-backup, nc-export-ncp, nc-import-ncp, nc-restore-snapshot, nc-restore, and nc-rsync-auto. The main panel has a heading "Create BTRFS snapshot of the datadir". It contains a note: "Snapshots take up very little space because only the differences from one to the next are saved. This requires the datadir to be in a BTRFS filesystem". Below this is a "Limit" input field set to "30" with an "Apply" button. A callout box for "nc-snapshot" says: "[ nc-snapshot ] Maintenance mode enabled. Nextcloud is in maintenance mode - no apps have been loaded". Another callout box for "nc-snapshot" says: "Create a readonly snapshot of '/RAID/ncp-data' in '/RAID/ncp-data/..ncp-snapshots/manual\_2020-02-17\_205746'. snapshot manual\_2020-02-17\_205746 generated. Maintenance mode disabled".

2. Perform automatic Backup of database (a “List of documents”...).

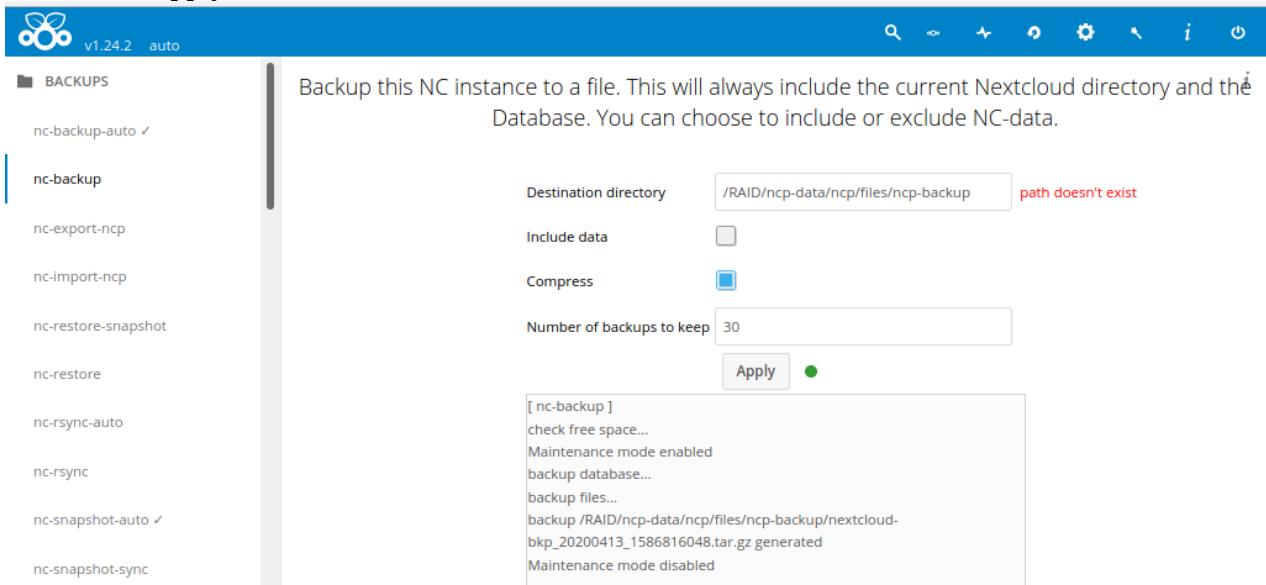
- Go to “BACKUPS” → “nc-snapshot-auto”
  - It will be saved in: /RAID/ncp-snapshots
  - “Active”: Activate
  - Push “Apply”

The screenshot shows the NextcloudPi configuration interface with the title "BACKUPS". On the left, there is a sidebar with options: nc-rsync-auto, nc-rsync, nc-snapshot-auto (marked with a checkmark), nc-snapshot-sync, nc-snapshot, and CONFIG. The main panel has a heading "Scheduled datadir BTRFS snapshots". It shows a status "Active" with an "Apply" button. A callout box for "nc-snapshot-auto" says: "[ nc-snapshot-auto ] automatic snapshots enabled".

3. Perform the **first** manual backup (Id, password, calendar, contacts, ...)

a) Go to “BACKUPS” → “nc-backup”

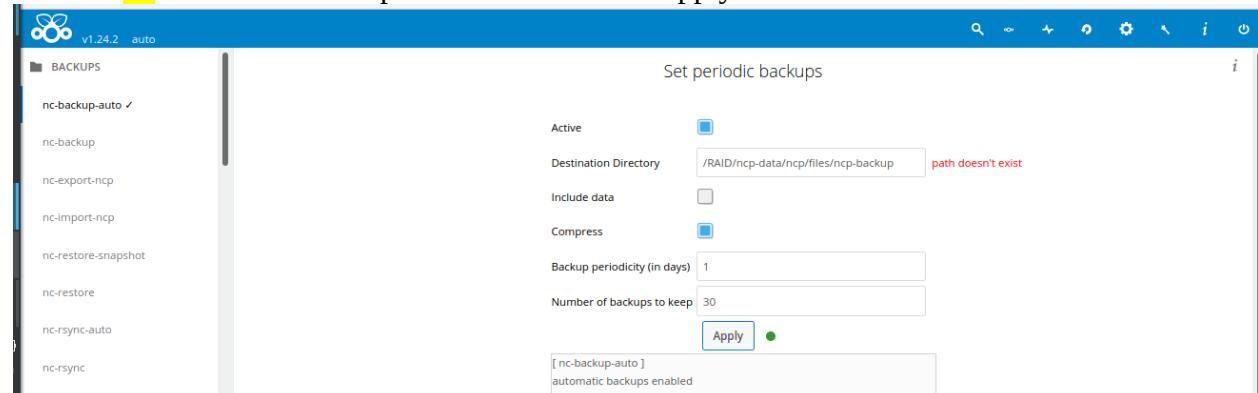
- “Destination directory”: */RAID/ncp-data/ncp/files/ncp-backup*
- “Include data”: **Not Activate**
- “Compress”: Activate
- “Number of backups to keep”: **30**
- Push “Apply”



4. Perform automatic backups (Id, password, calendar, contacts, ...)

a) Go to “BACKUPS” → “nc-backup-auto”

- “Active”: Activate
- “Destination Directory”: */RAID/ncp-data/ncp/files/ncp-backup*
- “Include data”: Unactivate
- “Compress”: Activate
- “Backup periodicity (in days)": **1**
  - It will be do **1** backup per day
- “Backup limit” : **30**
  - **30** number of backups saved in all Push “Apply”



5. In order to recognize and sync the backups files into your PC automatically, we need to change the permissions as bellow:

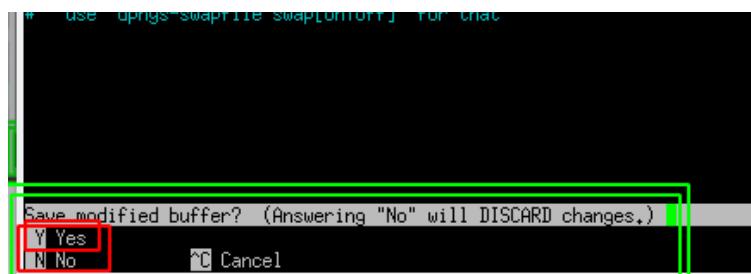
a) Open Putty

- b) see the RaspberryPi heure whit : date
- c) sudo nano /etc/crontab
- d) Write : **45 20 \* \* \*** chown -R www-data:www-data /RAID/ncp-data/ncp/files/ncp-backup
  - **\*** : Once a day
  - **20** : At 20h
  - **45** : and 45 min
- Following the structure : MM HH DD mes ww USER PROGRAMA

```
pi@nextcloudpi: ~
GNU nano 3.2 /etc/crontab Modified
#----- minute (0 - 59)
|----- hour (0 - 23)
| |----- day of month (1 - 31)
| | |----- month (1 - 12) OR jan,feb,mar,apr, ...
| | | |----- day of week (0 - 6) (Sunday=0 or 7) OR sun,mon,tue,wed,thu,fri,sat
| | | * user-name command to be executed
17 * * * * root cd / && run-parts --report /etc/cron.hourly
25 6 * * * root test -x /usr/sbin/anacron || (cd / && run-parts --report /etc/c$
47 6 * * 7 root test -x /usr/sbin/anacron || (cd / && run-parts --report /etc/c$
52 6 1 * * root test -x /usr/sbin/anacron || (cd / && run-parts --report /etc/c$
50 20 * * * root chown -R www-data:www-data /RAID/ncp-data/ncp/files/ncp-backup
10 * * * * root poweroff
```

e) Exit phusing:

- Crtl + X



f) Save the changes pushing **Y** and **Enter**

6. Change the time of automatic backups (at 3 am by default), as explained before:

- a) sudo nano /etc/cron.d/ncp-backup-auto
- b) Write : "**00 21 \* \* \*** root /usr/local/bin/ncp-backup-auto"
  - **\*** : Once a day
  - **21** : At 21h
  - **00** : and 0 min
- You can now the hour of your Pi with : date
- Following the structure : MM HH DD mes ww USER PROGRAMA

7. You can change the time of automatic poweroff, as explained before:

- a) sudo nano /etc/crontab
- b) Write : "0 21 \* \* \* root poweroff"

- \* : Once a day

- 21 : At 21h

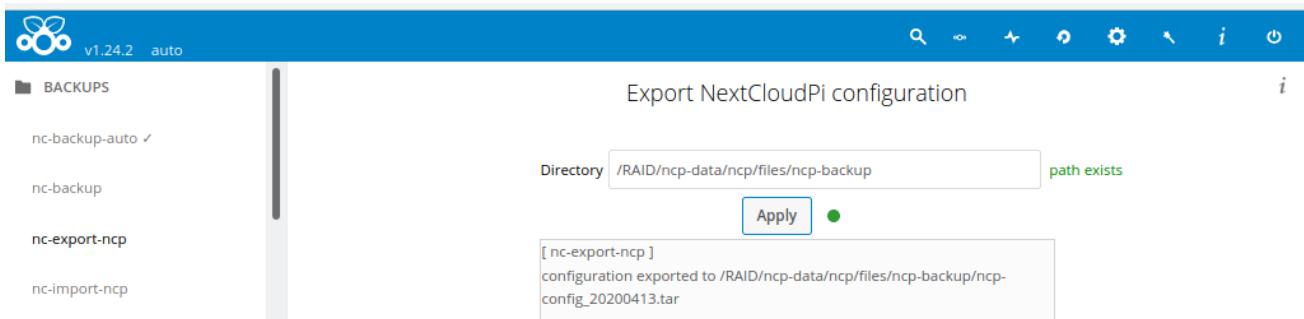
- 00 : and 0 min

- You can now the hour of your Pi with : date

- Following the structure : MM HH DD mes ww USER PROGRAMA

8. Export NextCloudPi configuration (ncp-backup-auto, nc-database, nc-datadir, ...)

- a) Go to “BACKUPS” → “nc-export-ncp”
- “Directory”: /RAID/ncp-data/ncp/files/ncp-backup



# External access

Very probably your public IP change from time to time. In order for you to be able to access your Nextcloud, from outside of your house, you need a DDNS service tracks IP. There are different options, for exemple duckDNS, freeDNS, no-ip or spDYN. I have tried duckDNS, it's totally free, it works but I didn't know to solve a problem with my Nextcloud app. Finally, I have chosen OVH. It's 3€/year and I have not problem.

## 1. Buy domain name

- a) Go to OVH website (from your country) → *Hosting* → *Domain* → *Continue*
- b) Chose a free name and an extension for you domain (the .ovh extension is cheaper): for exemple *mypersonaldomain.ovh*
- c) Select *DNSSEC service* and *Standard Service* → *Continue*
- d) Select *I don't need a web hosting package with my domain name* → *Continue*
- e) *Finally , you open a compte and pay the domain*

The screenshot shows the OVHcloud website interface. On the left, a sidebar lists services: Dominios, Hosting y sitios web, Hosting Plesk, Correo electrónico, Office 365, and SSL Gateway / CDN. The 'Dominios' section is selected, showing a price of 0.99€ + IVA/año. To the right, a large window titled 'Reserve your domain' shows a progress bar at step 1. Below it, a search bar finds 'mypersonaldomain.ovh'. Two domain options are listed: 'pwskdhf.ovh' (Available) and 'sssssss.ovh' (Available). Both are priced at £2.99 ex.VAT/1st year. At the bottom, there are sections for 'Add options' (with checkboxes for DNS Anycast and DNSSEC service), 'Select the level of service that best matches your current situation' (with radio buttons for Standard, Diamond, and Platinum Service, all marked as included), and a 'Continue' button.

## 1. Configuration OVH count

- Open your count → *Domains* → *mypersonaldomain.ovh*
- In *General information* → *Security*, you can enable the two options

The screenshot shows the OVHcount domain management interface. The top navigation bar includes tabs for General information, DNS zone, DNS servers, Redirection, DynHost, GLUE, and Recent tasks. The General information tab is selected. The interface is divided into several sections:

- General information:** Shows Service status (Active), Email filer, and Antispam/Anti-.
- Quotas:** Displays Email account quota (0/0), Auto-reply quota (0/0), and Redirection quota (0/1000).
- Plan:** Shows Solution redirect and Contacts.
- Security:** Includes options for DNS servers (Active), Anycast DNS option (Classic DNS), Web hosting with free email (More info), Web hosting plans ordered (No web hosting plans ordered), Associated hosting plans (No associated hosting package), Protection against domain name transfer (Enabled), Secured Delegation - DNSSEC (Enabled), WHOIS listing (The registry managing this domain name does not authorise the public display of your custom data), and Substitute email addresses (Manage substitute email addresses).
- Plan:** Shows Solution gold and Automatic renewal scheduled in April 2021.

- Go to *DynHost* → *Manage access* → *Create a username*

The screenshot shows the DynHost management interface. The top navigation bar includes tabs for General information, DNS zone, DNS servers, Redirection, DynHost (selected), GLUE, Recent tasks, and More +. The DynHost tab is highlighted with a yellow border. A message box indicates "There is no DynHost entry in the DNS zone." Below the tabs, there is a search bar and a "Create a username" button, which is highlighted with a red box.

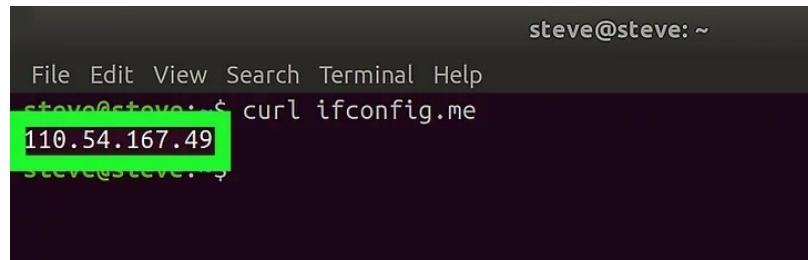
The main area displays a table with columns for ID, Zone, Sub-domain, and a refresh icon. A "Back" link is also present.

The "Create a DynHost username" form is shown in a modal window:

- Create a DynHost username:** You are going to create a DynHost username to manage the DynHost sub-domains you have created. It is made up of your domain name followed by your chosen name, for example, domainname.com-username.
- \* Fields followed by an asterisk are mandatory.
- The username suffix:** mypersonaldomain.ovh - **nextcloud (for exemple)**
- Subdomain:** **pi (for exemple)** .mypersonaldomain.ovh
- Password:** **1234**
- Confirmation:** **1234**
- Buttons:** Cancel and Confirm

d) Now we will need to know the **public IP**

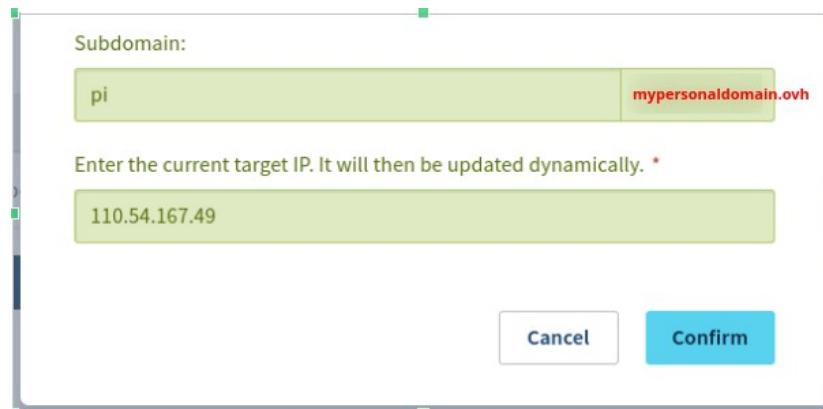
- Open Putty
- Write : *curl ifconfig.me*



A terminal window titled "steve@steve: ~". The command "curl ifconfig.me" is run, and the output "110.54.167.49" is highlighted with a green box.

e) Back to *DynHost* → Add a DynHost

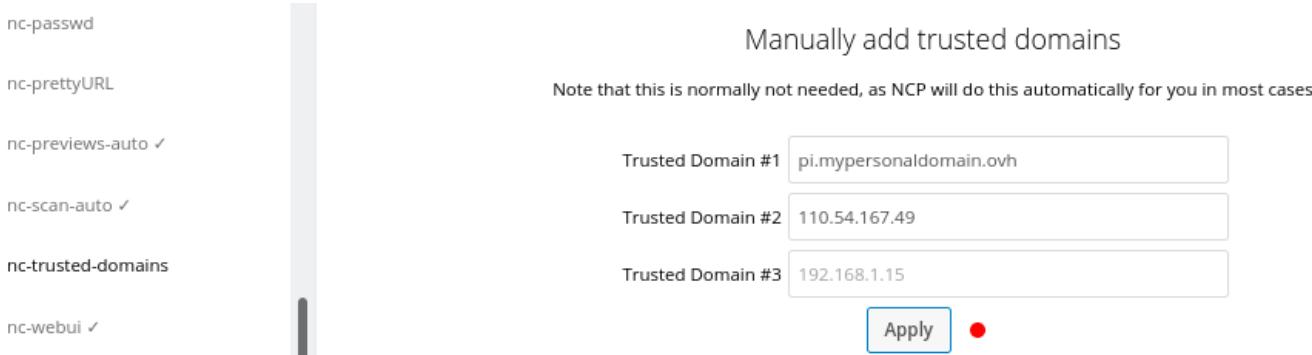
- Subdomain : *Pi*
- Public IP : **110.54.167.49**



A modal dialog box for adding a DynHost. It has two input fields: "Subdomain:" containing "pi" and "mypersonaldomain.ovh", and "Enter the current target IP. It will then be updated dynamically. \*" containing "110.54.167.49". At the bottom are "Cancel" and "Confirm" buttons.

f) Came back to <https://nextcloudpi.local:4443> → Config → nc-trusted-domains

- “Trusted Domain #1”: *pi.mypersonaldomain.ovh*
- “Trusted Domain #2”: **110.54.167.49**

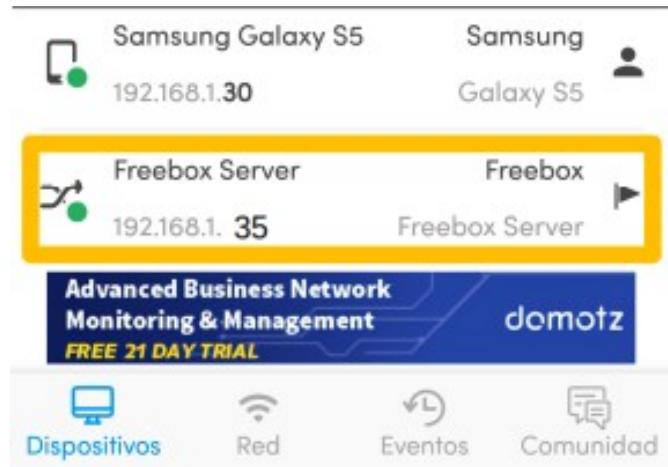


The screenshot shows the NextCloud configuration interface under the "nc-trusted-domains" section. On the left, there's a sidebar with options like nc-passwd, nc-prettyURL, nc-previews-auto (with a checkmark), nc-scan-auto (with a checkmark), nc-trusted-domains (selected), and nc-webui (with a checkmark). The main area has a title "Manually add trusted domains" and a note: "Note that this is normally not needed, as NCP will do this automatically for you in most cases". There are three input fields for "Trusted Domain #1", "Trusted Domain #2", and "Trusted Domain #3", each containing the values "pi.mypersonaldomain.ovh", "110.54.167.49", and "192.168.1.15" respectively. A blue "Apply" button is at the bottom right, with a red dot indicating it needs to be clicked.

## 2. Configuration of router (Free box for exemple)

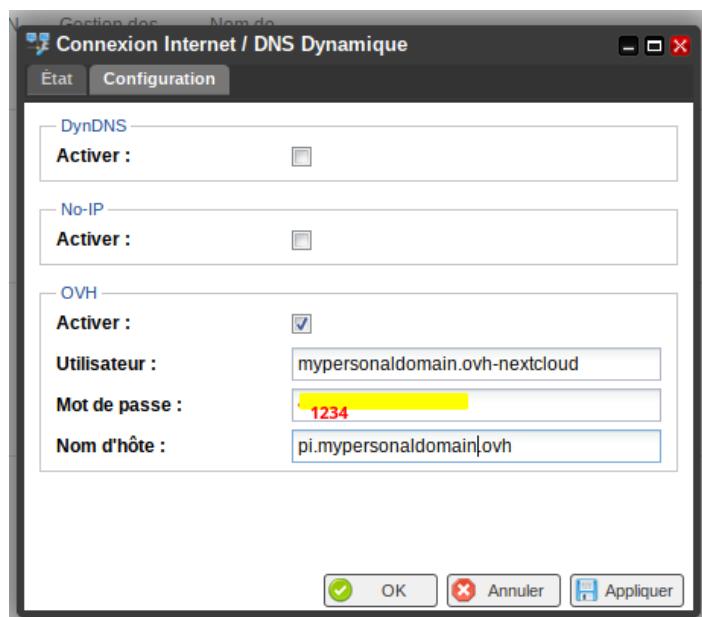
a) Now we will need to know the **router IP**

- Open the application Fing in you smartphone
- Then, connect your smartphone by wifi and looking for the devices connected
- You will recognize your IP address of your router (in my case **192.168.1.35** see the orange square)



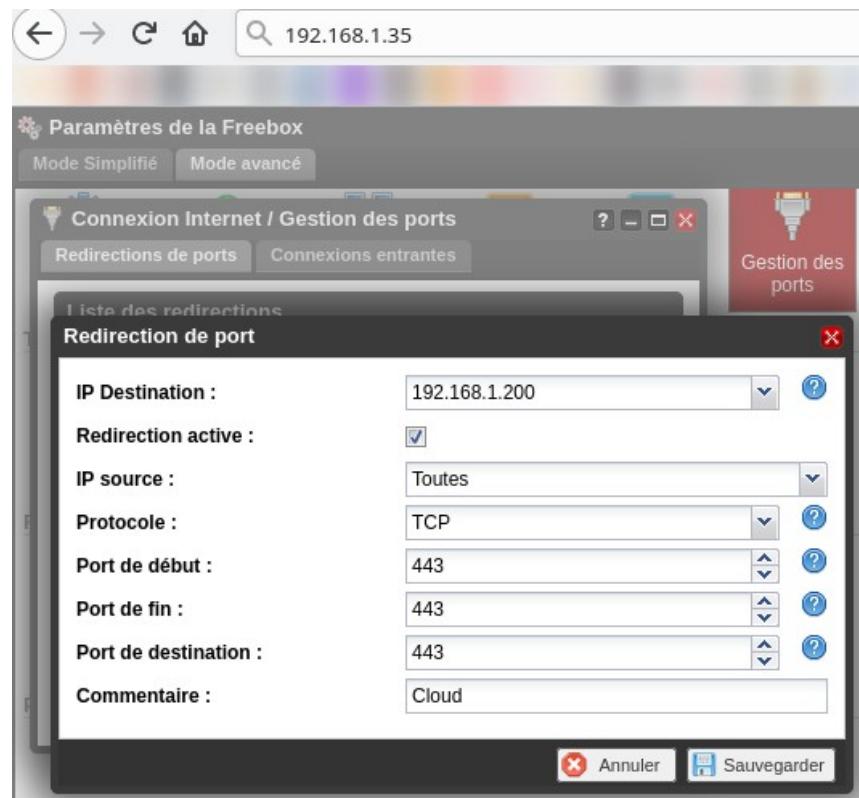
b) Write the **router IP** in to your navigator → *Parametres* → *DNS Dynamique* → *Configuration* → *OVH*:

- “Utilisateur” : *mypersonaldomain.ovh-nextcloud*
- “Mot de passe” : *1234* (ATTENTION! It’s the password from DynHost Username for OVH)
- “Nom d’hôte” : *pi.mypersonaldomain.ovh*



c) Last step, came back again to your router. Write the **router IP** in to your navigator → *Parametres → Gestion des ports → Redirections de ports → Ajouter :*

- “IP Destination” : 192.168.1.200 (ATTENTION! It’s the IP of RaspberryPi, see pag 6)
- “Redirection active” : *Active*
- “IP source” : *Tous*
- “Protocol” : *TCP*
- “Port de début” : 443
- “Port de fin” : 443
- “Port de destination” : 443
- “Commentaire” : *Cloud (for exemple)*



# Install Nextcloud-client

1. For Linux:

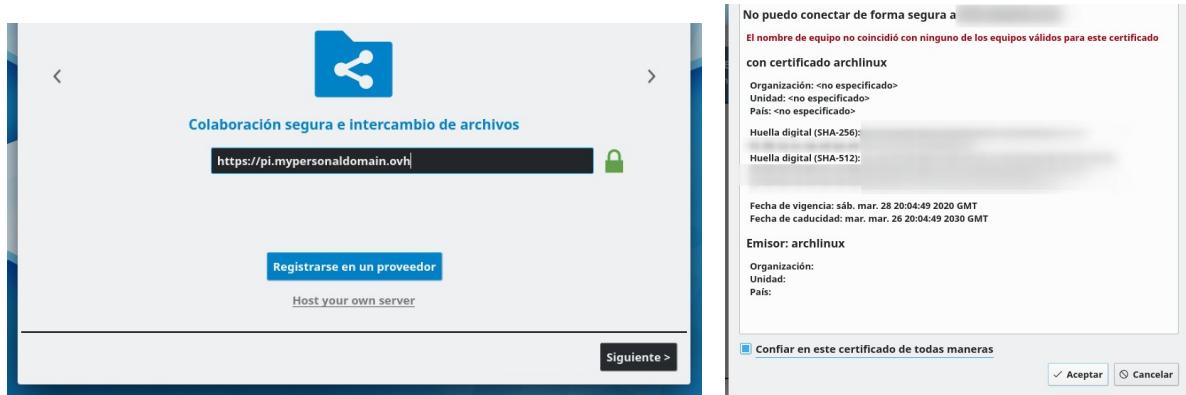
- a) sudo add-apt-repository ppa:nextcloud-devs/client
- b) sudo apt update
- c) sudo apt install nextcloud-client

2. For Windows or Mac, you can install Nextcloud Desktop from :

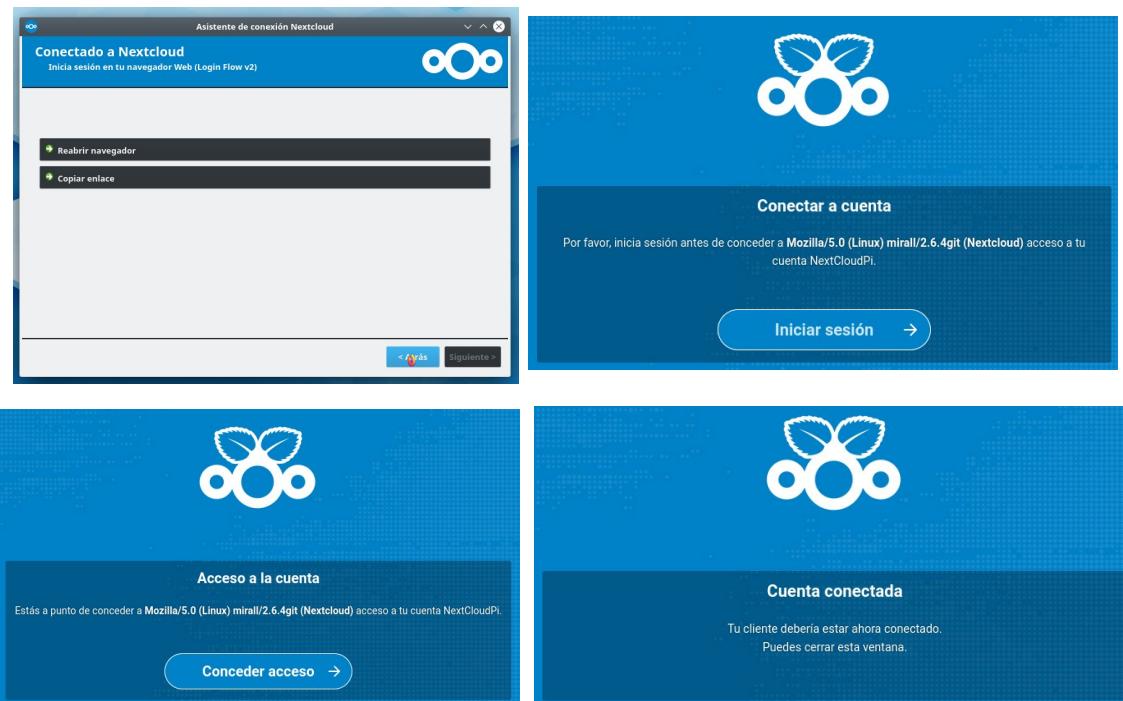
<https://nextcloud.com/install/#install-clients>

3. Open the Nextcloud client → Enter :

- a) “Server direction” : *pi.mypersonaldomain.ovh*
- b) Click to *Follow*
- c) And accept the certificate

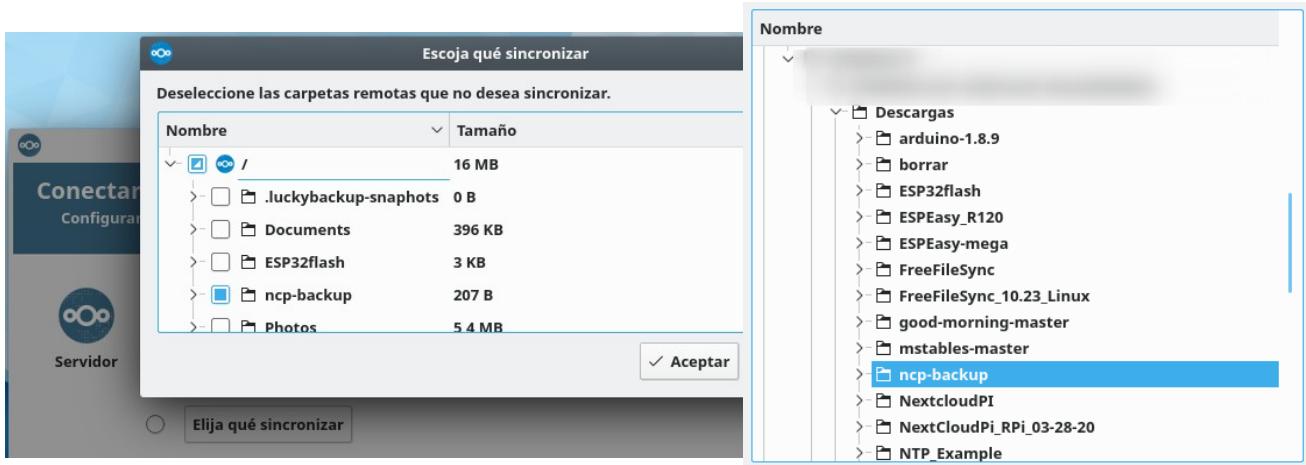


- d) The next windows will open the web navigator.
- e) Open your Nextcloud count and give the authorizations

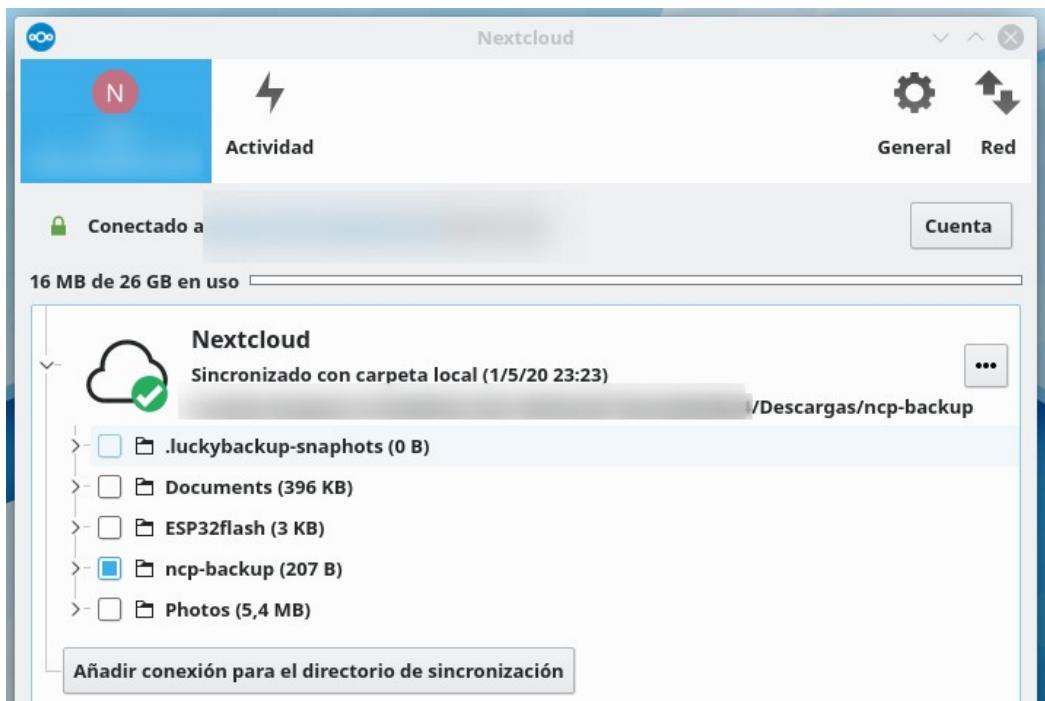


4. In my case, I sync my folders one by one

- a) For exemple the ncp-backup folder from the RaspberryPi with my ncp-backup folder form my PC



5. Finally, the 2 folders will be sync each other :



THE END