

NEXTCLOUD PI

Install Nextcloudpi onto SD card

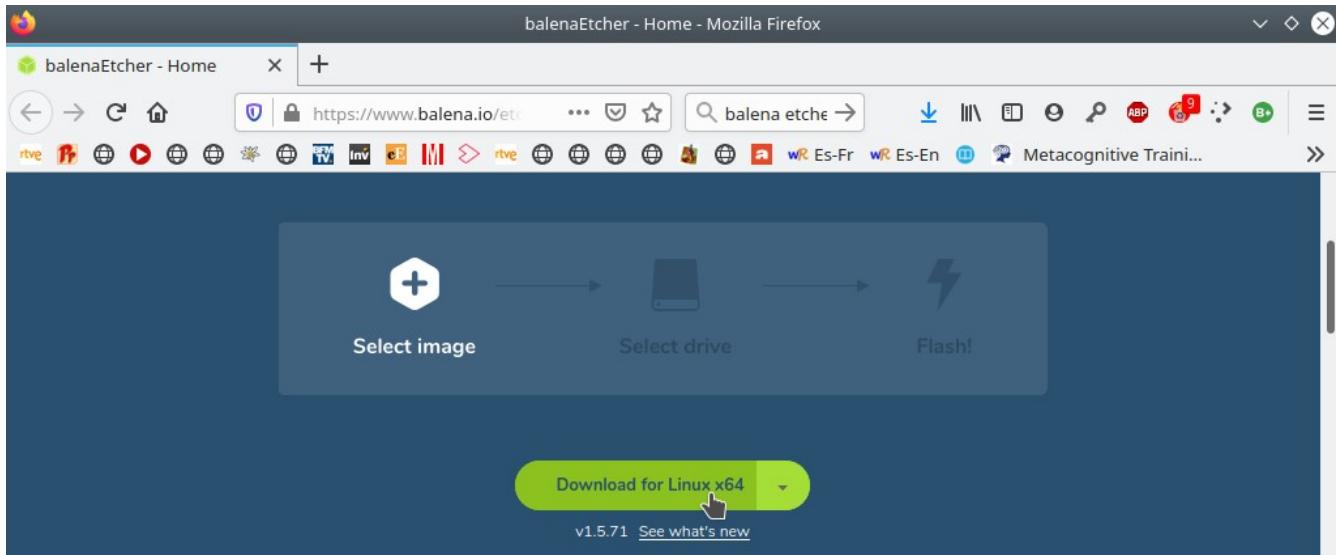
1. **Install Gparted (for windows, you can use Windows Computer Management or Partition Magic)**

a) `sudo apt-get install gparted`

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

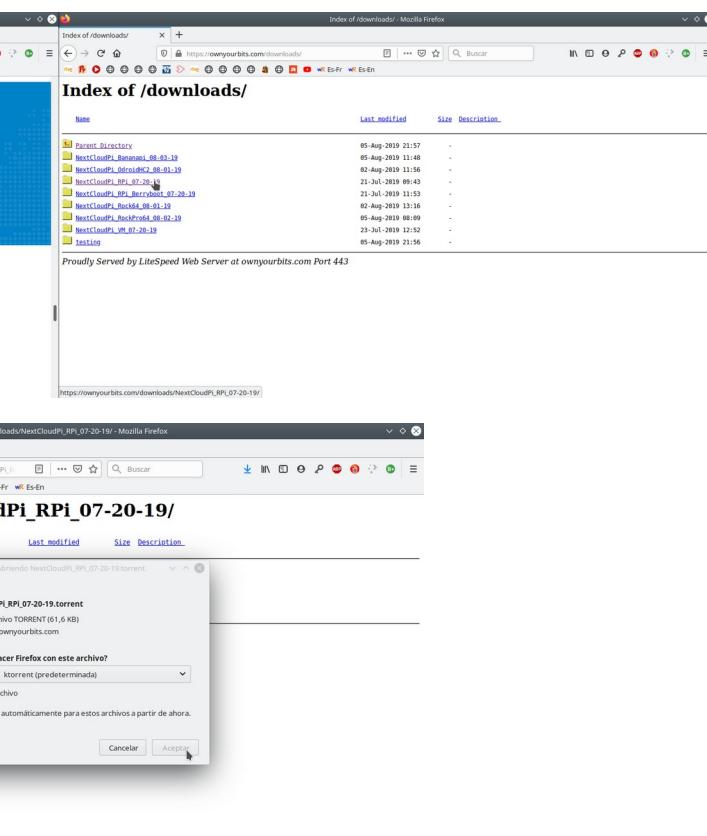
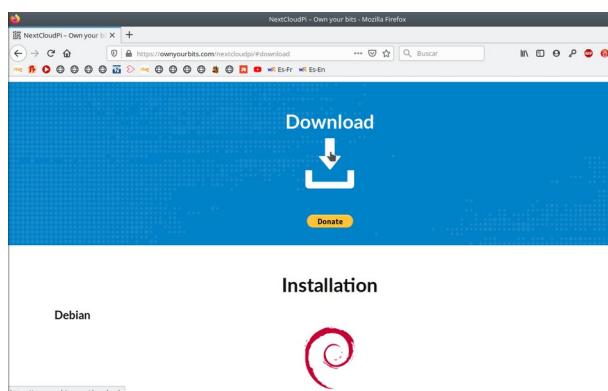
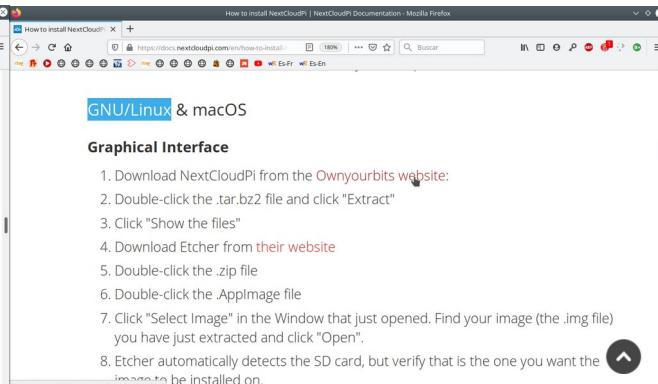
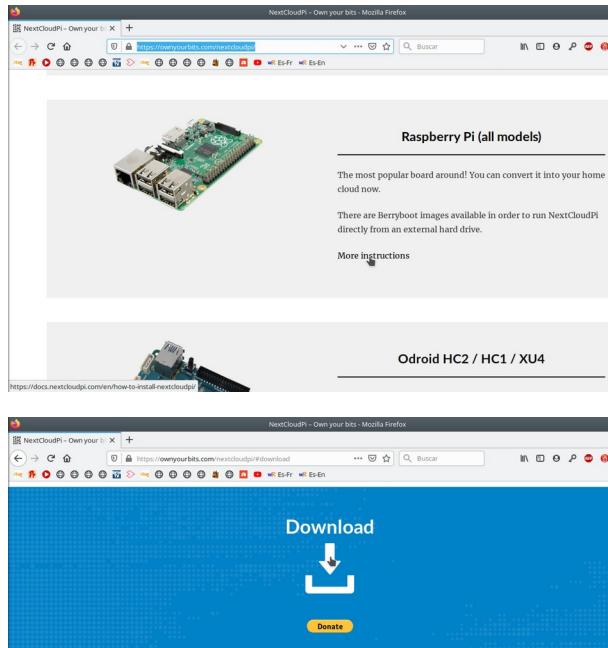
3. **Install Balena Etcher (available for windows):**

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



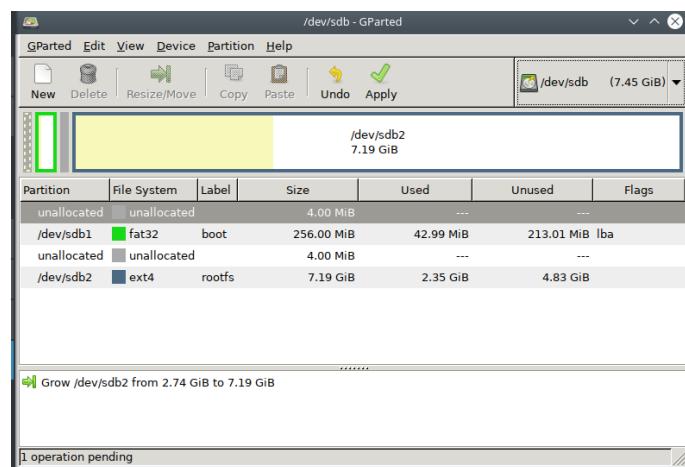
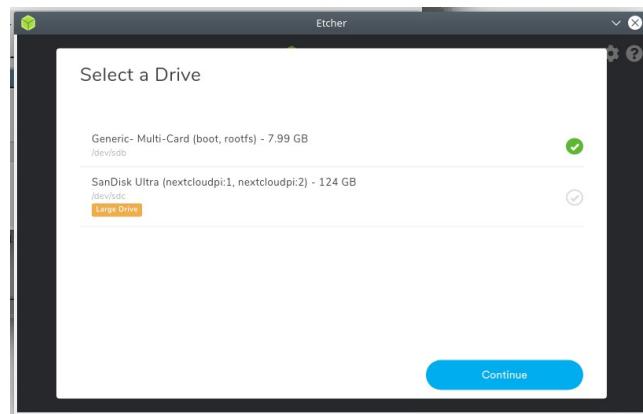
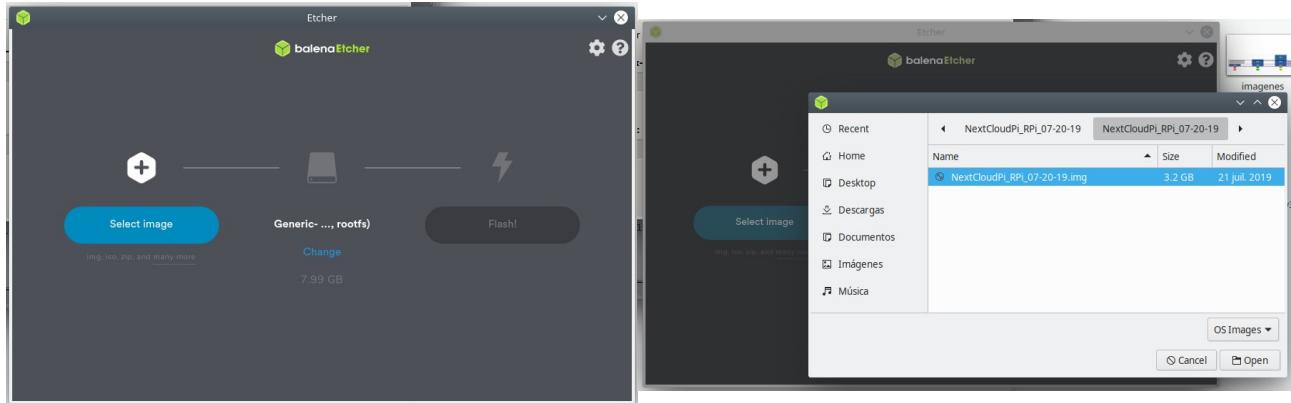
4. Download NextcloudPi

- 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

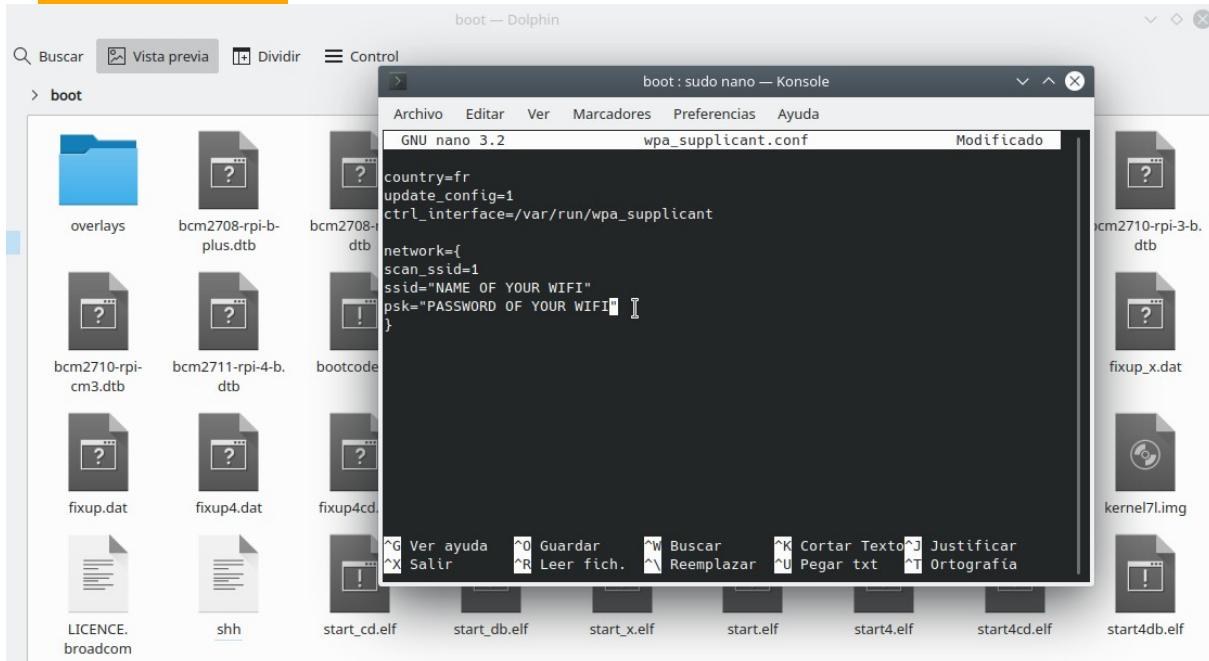
- a) Open Balena Etcher → Select image → *NextCloudPi_RPi_mm-dd-yy.img*
- b) Select your SD card → Change → Flash
- c) Then, open Gparted to resize the partition installed and to use all SD card capacity (Not make SWAP partition!)



Acces to Nextcloudpi from PC

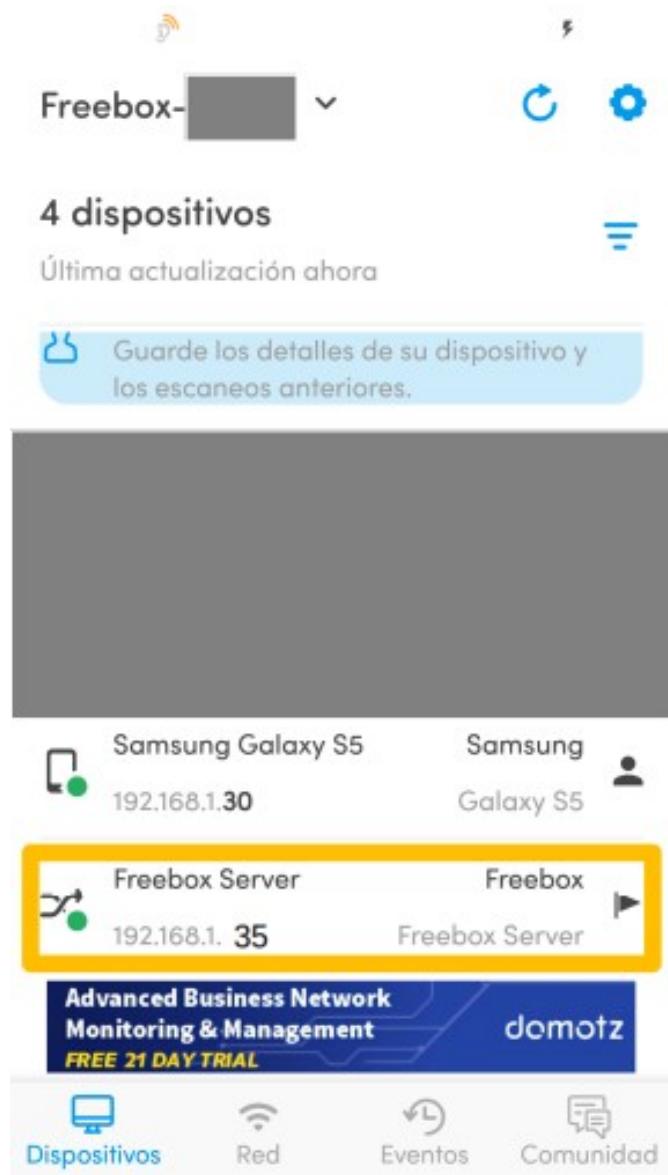
1. With the SD card in the PC

- 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)



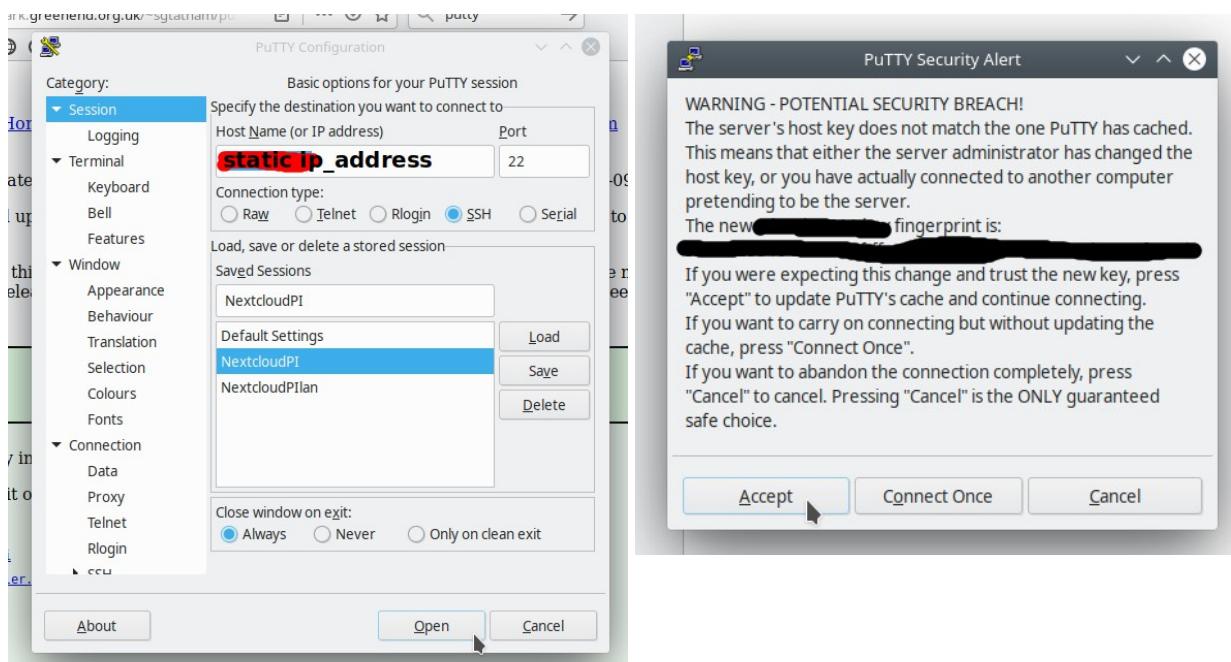
- d) Go to ***ROOTFS*** partition of your SD card and open the file ***/Etc/dhcpcd.conf***
- Edit ***dhcpcd.conf*** with the BlocNote
 - Paste the code below at the end of document:
- ```
interface eth0
static ip_address=192.168.1.200/24
static routers=192.168.1.35
static domain_name_servers=192.168.1.35

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

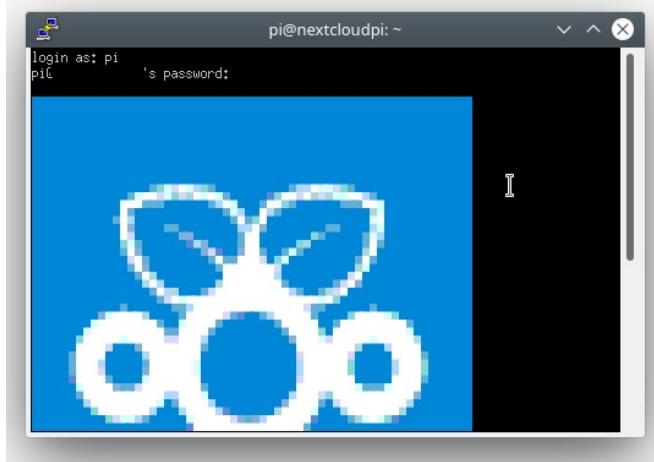
- In *Host Name*, you can write the raspberry **IP adresse of RaspberryPI** → *Open*
- The first time, you have to accept the security alert
- The first time can take same minutes
- For to copy/paste you can push the mouse scroll wheel



## 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

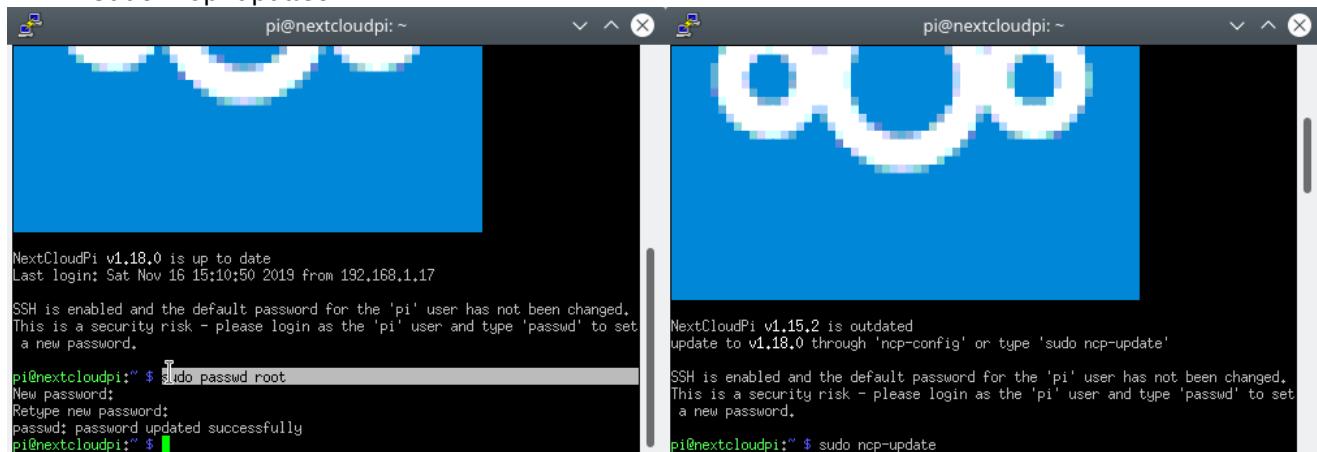
- **PASSWORD-Pi**

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

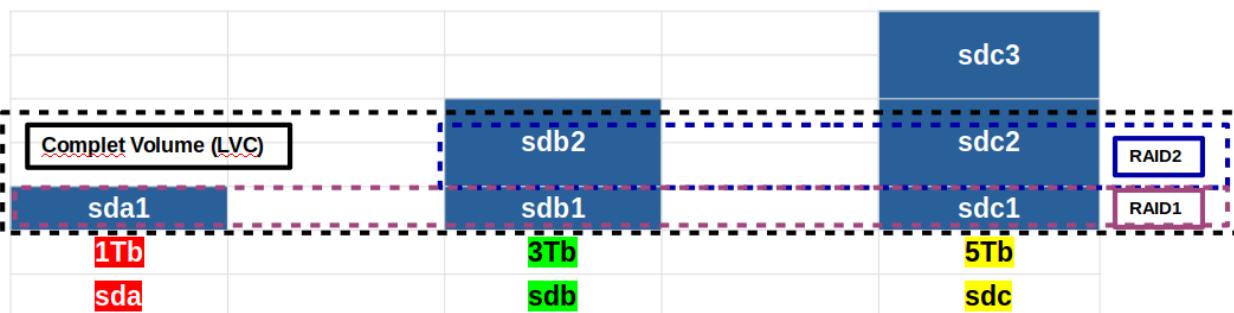
- sudo apt-get install lvm2 mdadm ntfs-3g
- sudo reboot

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:~ $ 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:~ $ sudo fdisk -l
Disk /dev/mmcblk0: 7.5 GiB, 7994343424 bytes, 15613952 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/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 2048000 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: 0xc801133

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

```

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

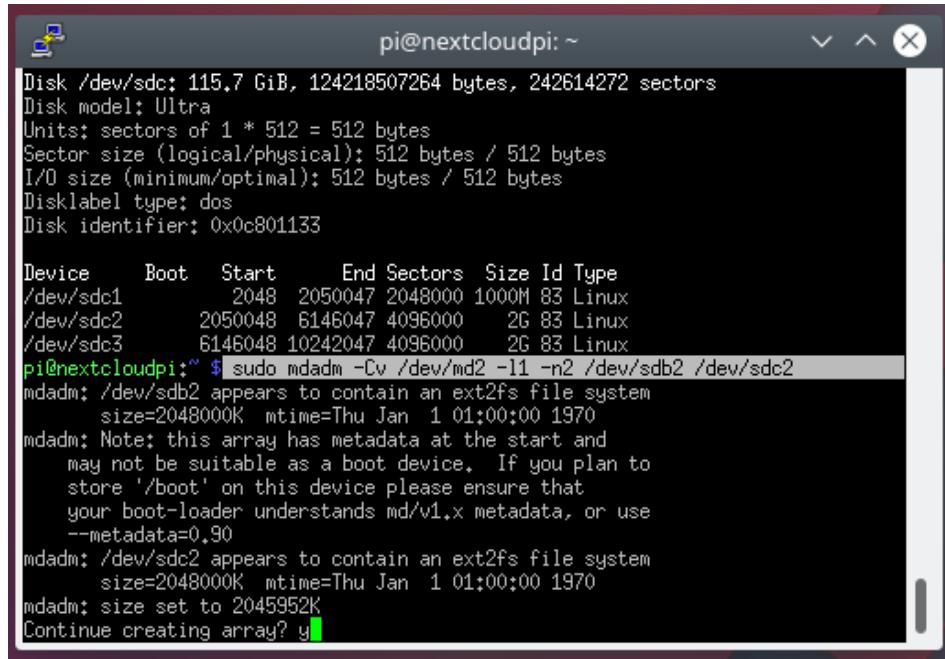
c) sudo mdadm -Cv /dev/md2 -l1 -n2 /dev/sdb2 /dev/sdc2

- 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

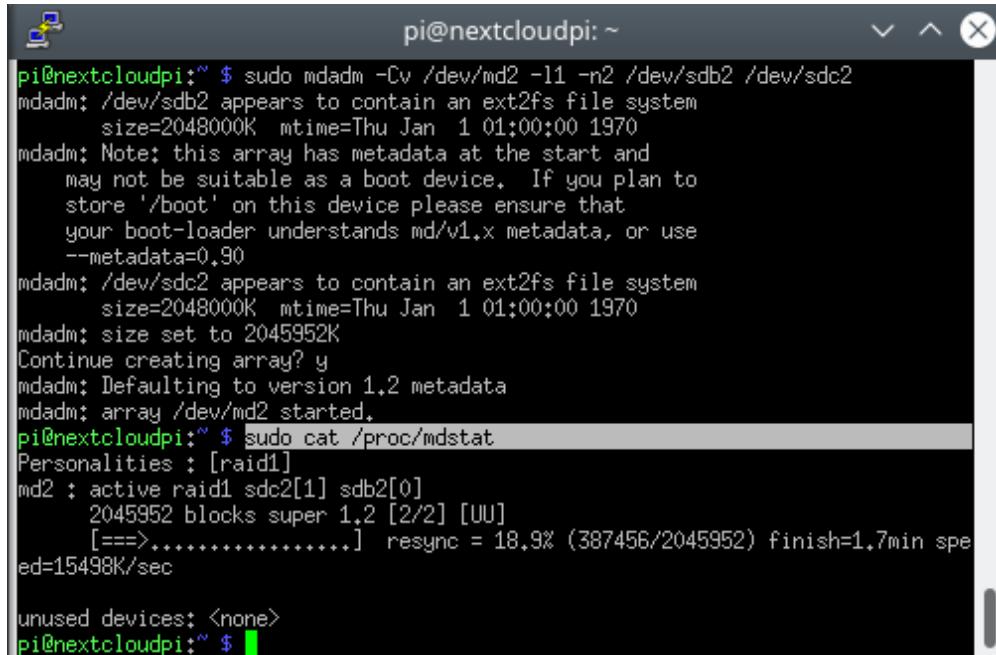


```
pi@nextcloudpi: ~
Disk /dev/sdc: 115.7 GiB, 124218507264 bytes, 242614272 sectors
Disk model: Ultra
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0x0c801133

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))

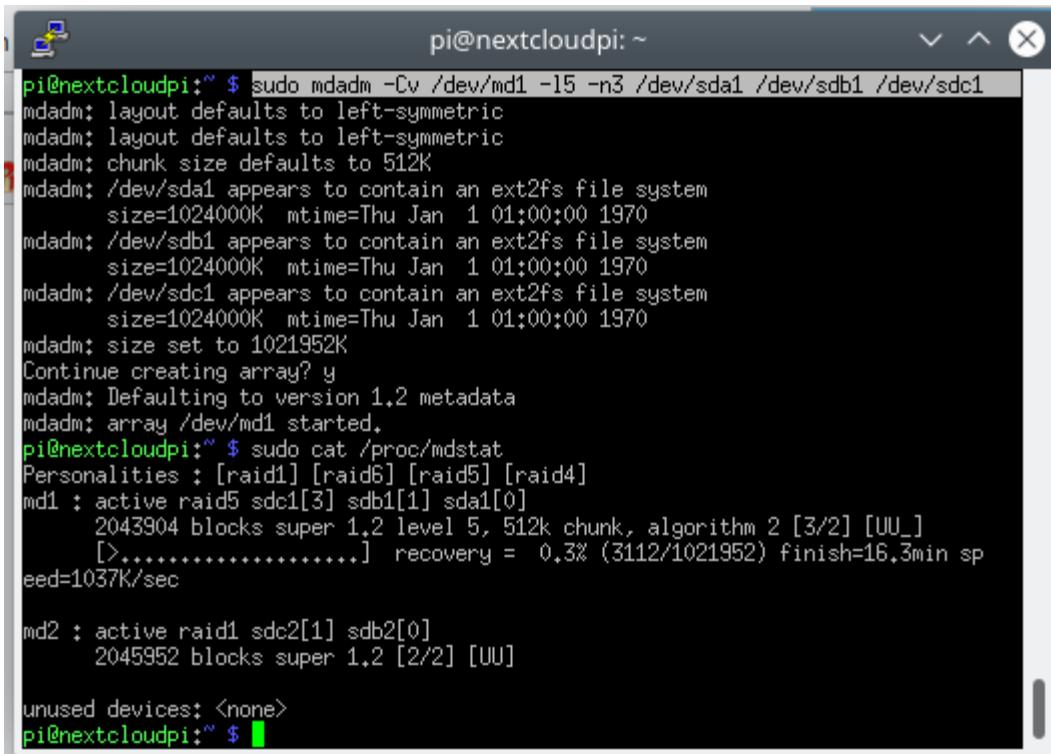
e) `sudo mdadm -Cv /dev/md1 -l5 -n3 /dev/sda1 /dev/sdb1 /dev/sdc1`

- `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, followed by the output of the `mdadm` command. The output shows the creation of a RAID 5 array named `md1` with three drives: `sda1`, `sdb1`, and `sdc1`. It also shows the current status of the array and other arrays present on the system, including `md2` which is an RAID 1 array. The terminal prompt is `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

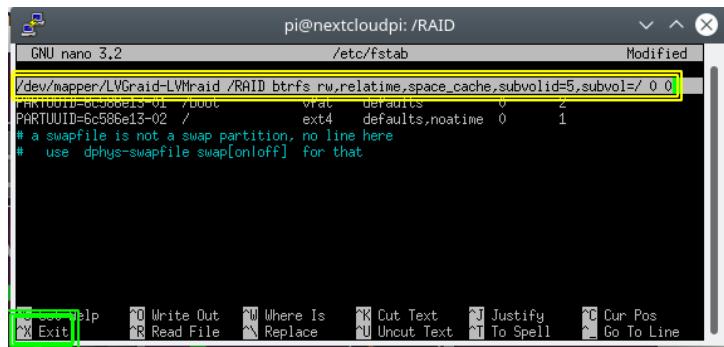
a) sudo mkdir /USB

```
pi@nextcloudpi: ~
pi@nextcloudpi: /RAID
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

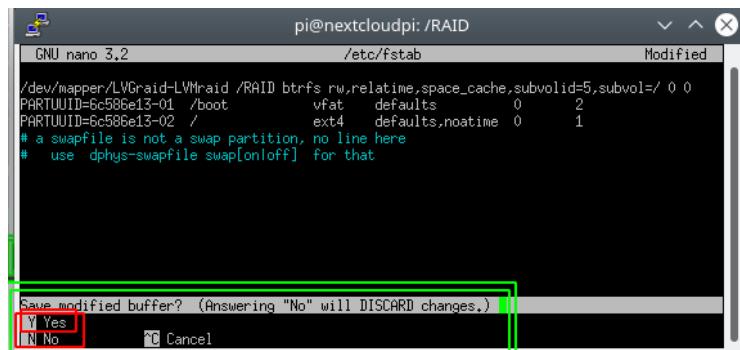


```
pi@nextcloudpi: /RAID
GNU nano 3.2 /etc/fstab Modified
/dev/mapper/LVGraid-LVMraids /RAID btrfs rw,relatime,space_cache,subvol=5,subvol=/ 0 0
PARTUUID=6c586e13-01 /boot vfat defaults 0 2
PARTUUID=6c586e13-02 / ext4 defaults,noatime 0 1
a swapfile is not a swap partition, no line here
use dphys-swapfile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

File Help Write Out Where Is Cut Text Justify Cur Pos
Exit Read File Replace Uncut Text To Spell Go To Line
```

- c) Exit phusing:

- **Crtl + X**

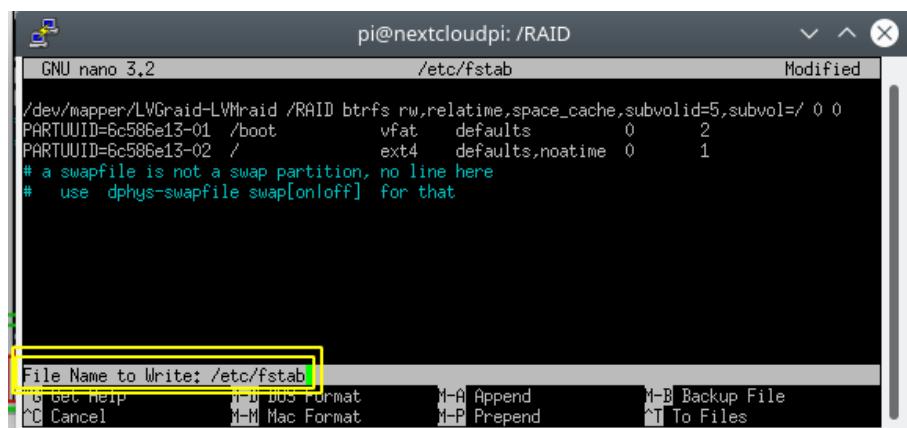


```
pi@nextcloudpi: /RAID
GNU nano 3.2 /etc/fstab Modified
/dev/mapper/LVGraid-LVMraids /RAID btrfs rw,relatime,space_cache,subvol=5,subvol=/ 0 0
PARTUUID=6c586e13-01 /boot vfat defaults 0 2
PARTUUID=6c586e13-02 / ext4 defaults,noatime 0 1
a swapfile is not a swap partition, no line here
use dphys-swapfile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

Save modified buffer? (Answering "No" will DISCARD changes.)
Y Yes
N No
Cancel
```

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

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



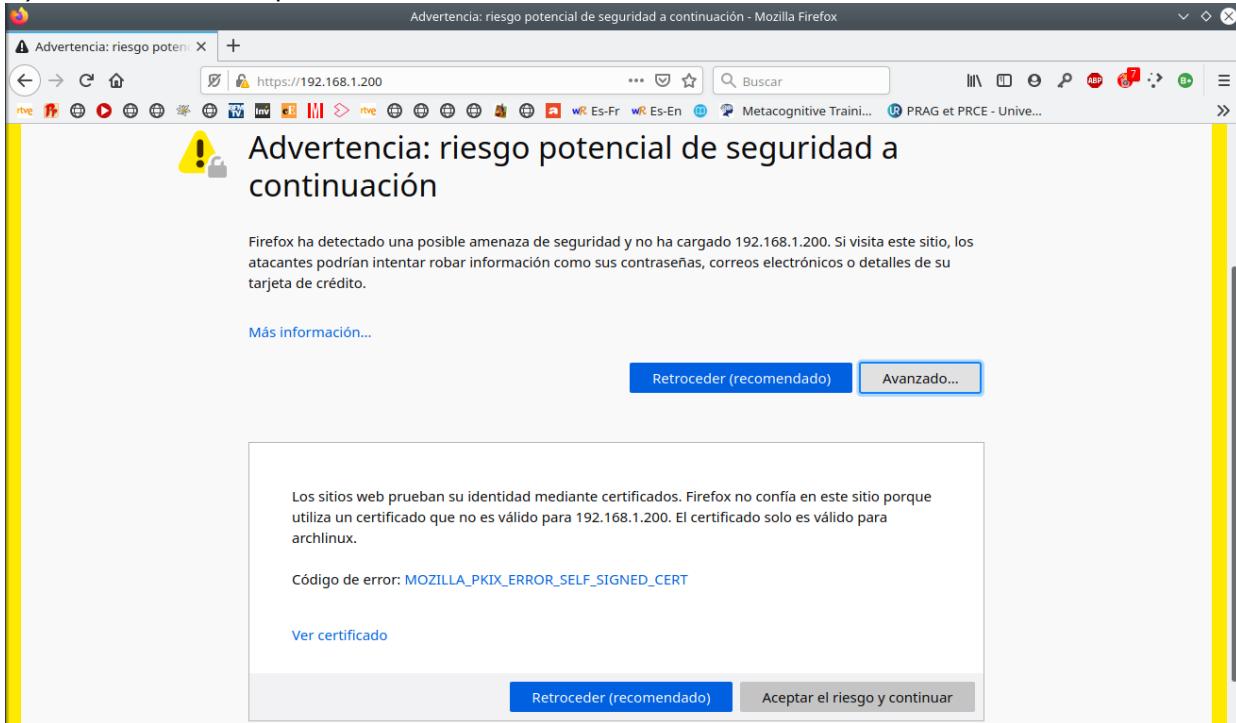
```
pi@nextcloudpi: /RAID
GNU nano 3.2 /etc/fstab Modified
/dev/mapper/LVGraid-LVMraids /RAID btrfs rw,relatime,space_cache,subvol=5,subvol=/ 0 0
PARTUUID=6c586e13-01 /boot vfat defaults 0 2
PARTUUID=6c586e13-02 / ext4 defaults,noatime 0 1
a swapfile is not a swap partition, no line here
use dphys-swapfile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

File Name to Write: /etc/fstab
G Get Help F-F DOS Format M-A Append M-B Backup File
C Cancel M-M Mac Format M-P Prepend T To Files
```

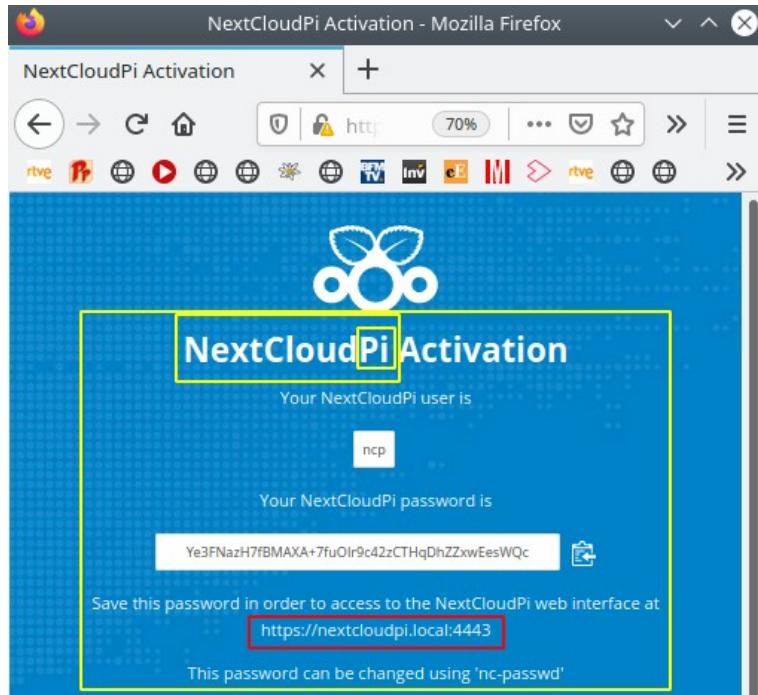
# Install NextcloudPi

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

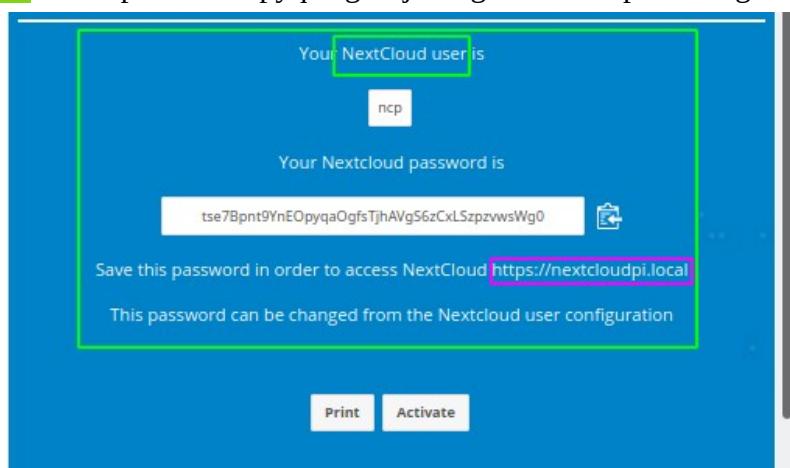
- a) <https://192.168.1.200/>
- b) Push "avanced"
- c) Push "accept the risk"



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

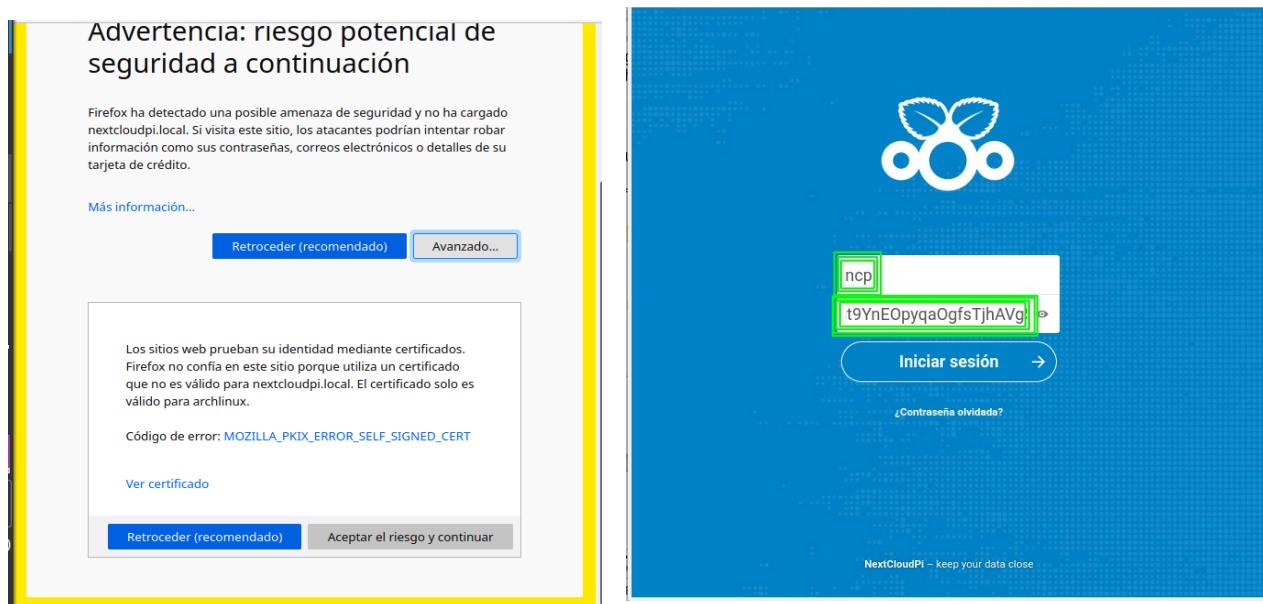


4. Copy the Id and the Password of **Nextcloud count** into a bloc text:
  - a) **Address:** <https://nextcloudpi.local>
  - b) **Id:** ncp
  - c) **Password:** tse7Bpnt9YnEOpyqaOgfsTjhAVgS6zCxLSzpzwswsWg0

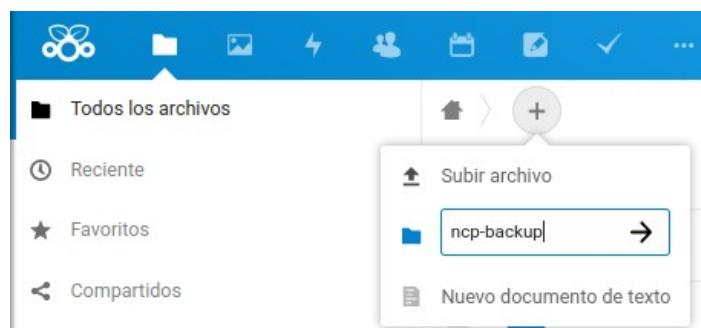


# Configuracion Nextcloud

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”



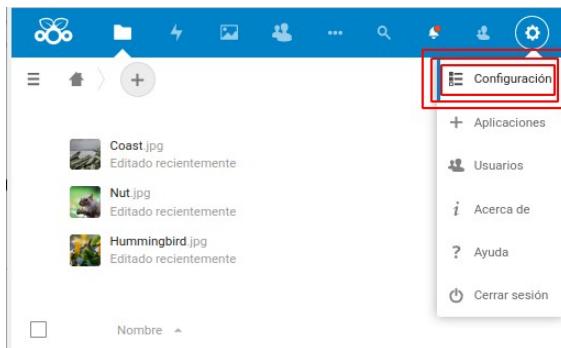
4. The Id and the password come from the previous windows below
  - a) **Id:** ncp
  - b) **Password:** tse7Bpnt9YnEOpyqaOgfsTjhAVgS6zCxLSzpzzwsWg0
5. After some minutes (only the first time), you can close the welcome windows
6. Create a new folder “ncp-backup”, where all backups of NextcloudPi will 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 | <input checked="" type="checkbox"/> Se necesita autenticación |           |
| Dirección del servidor  | smtp.gmail.com | :                                                             | 465       |
| Credenciales            | MAIL           | Password du MAIL                                              | Guardar   |

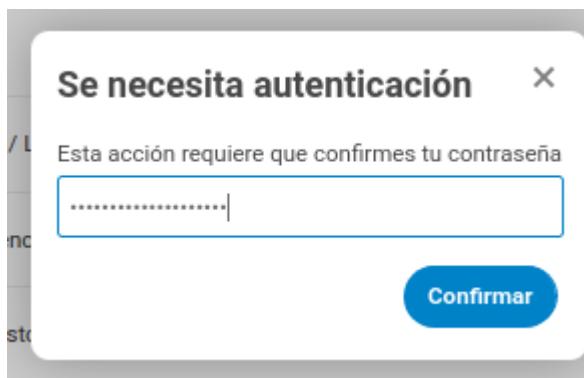
Probar configuración de correo electrónico Enviar mensaje

## 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.

- b) Write the Nextcloud Password



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

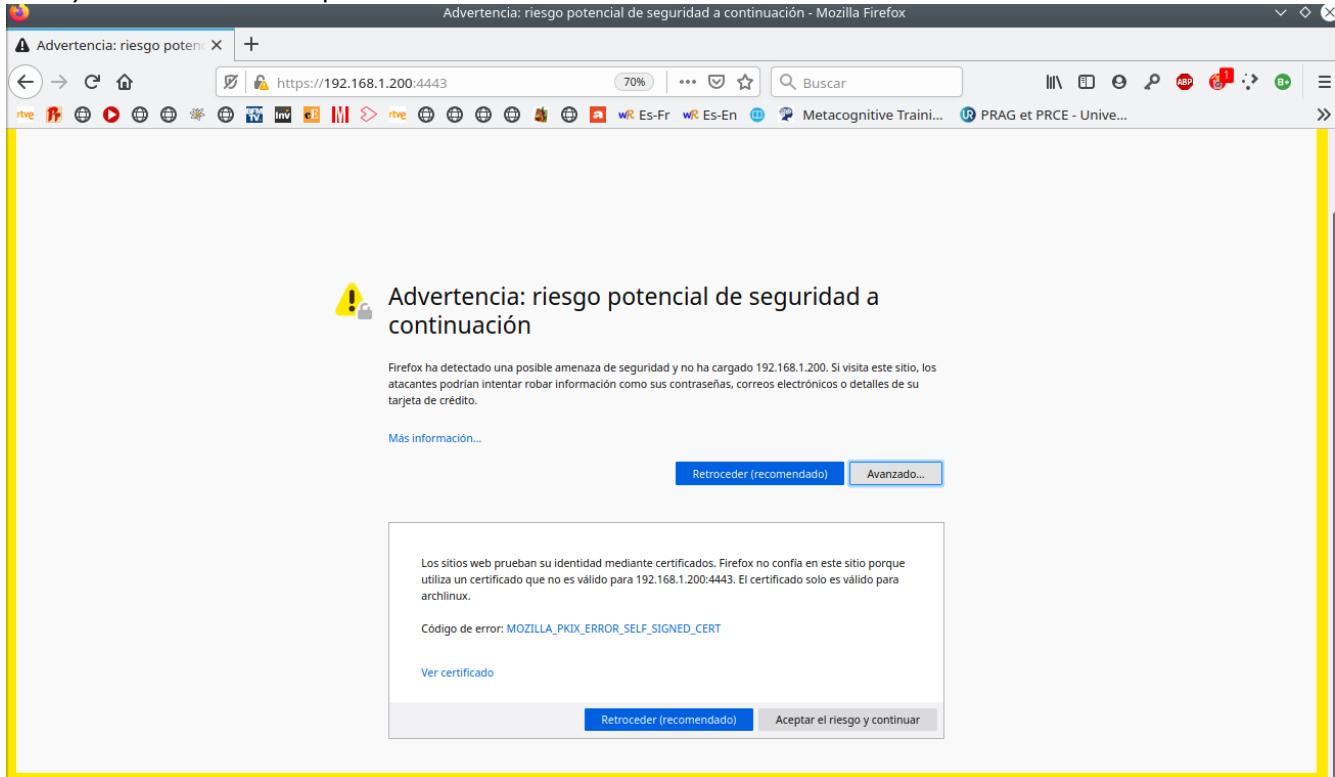
The screenshot shows the Nextcloud configuration interface under the "Almacenamiento externo" section. A table lists external storage configurations. One row, labeled "USB", is highlighted with a red box. The columns represent: Nombre de la carpeta (Name of the folder), Almacenamiento externo (External storage), Autentificación (Authentication), Configuración (Configuration), and Disponible para (Available for).

| Nombre de la carpeta | Almacenamiento externo | Autentificación | Configuración | Disponible para |
|----------------------|------------------------|-----------------|---------------|-----------------|
| USB                  | Local                  | Ninguno         | /media        | ncp             |

# 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"



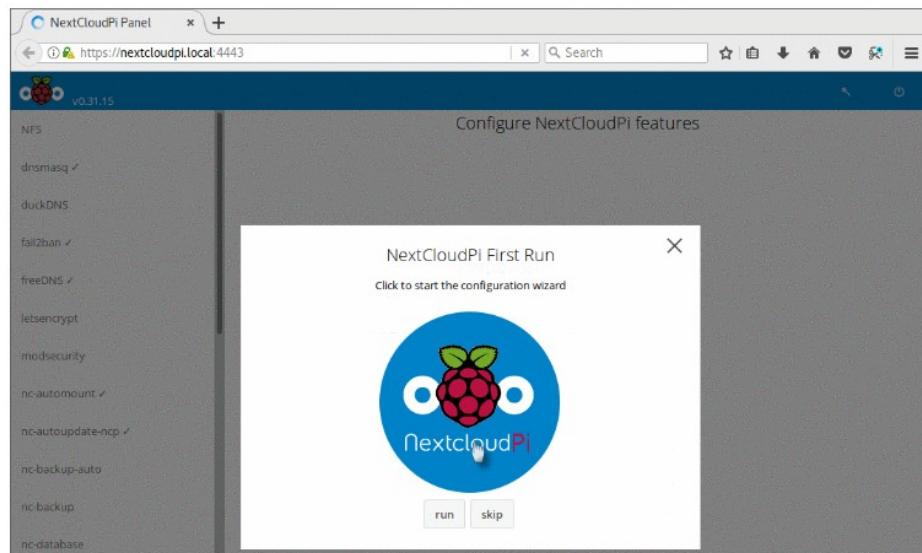
- You have to write your Id and your Password from the NextcloudPi count

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

A screenshot of a Mozilla Firefox browser window. The address bar shows the URL <https://nextcloudpi.local:4443>. 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, instructions say to save the password to access the interface at <https://nextcloudpi.local:4443>. To the left, a separate login dialog box is visible, titled "Identificación requerida". It shows the URL "https://nextcloudpi.local:4443 solicita su nombre de usuario y contraseña. El sitio web login". The "Nombre de usuario:" field contains "ncp" and the "Contraseña:" field contains a masked password. A "Cancelar" (Cancel) button is at the bottom right of the dialog.

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, a sidebar lists 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. The main panel title is 'Change your data dir to a new location, like a USB or SATA drive'. It contains notes about non-Unix filesystems and default locations. A 'Data directory' input field shows '/RAID/ncp-data', which is highlighted in red with a tooltip 'path doesn't exist'. An 'Apply' button is present. Below the input field, a message box displays maintenance mode logs, including moving data from /var/www/nextcloud/data to /RAID/ncp-data, creating a BTRFS subvolume, and enabling maintenance mode. It also shows system config values for tempdirectory, datadirectory, and logfile.

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

- 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 password change 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 title is 'Change password for the NextCloudPi Panel'. It includes a note about avoiding special characters like {}, ;, #. Two input fields are shown: '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'. An 'Apply' button is present. A message box at the bottom confirms the password update was successful, stating 'password updated successfully' and listing 'Site ncp already enabled', 'Site nextcloud already enabled', and 'Site ncp-activation already disabled'.

#### 5. Change maximum file size

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

The screenshot shows the NextCloudPi configuration interface with the title "Configure system limits for NextCloudPi". It includes fields for Maximum file size (0), Memory limit (0), PHP threads (0), and Redis memory (0). A sidebar on the left lists configuration items like nc-admin, nc-database, nc-datadir, nc-httpsonly, nc-init, and nc-limits. A blue "Apply" button is at the bottom right.

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 "nc-scan-auto" configuration page. It has sections for Active (checkbox checked), Recursive (checkbox checked), Ignore external files (checkbox unchecked), Scan periodicity (in minutes) (set to 120), and Path (three input fields containing /ncp/files/Documents/ncp-backup, /family/files/Photos, and /family/files/Videos). A blue "Apply" button is at the bottom right. A note at the bottom says "[ 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 "nc-httpsonly" configuration page. It has an "Active" checkbox (checked) and a blue "Apply" button with a green dot. A note at the bottom says "[ 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 with the sidebar menu on the left and the main configuration page on the right.

**Left Sidebar (v1.25.0 auto):**

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

**Main Configuration Page:**

**Section Title:** Periodically generate previews for the gallery

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

**Configuration Options:**

- Active:**
- Runtime (in minutes):**
- Buttons:**  (highlighted with a blue border)

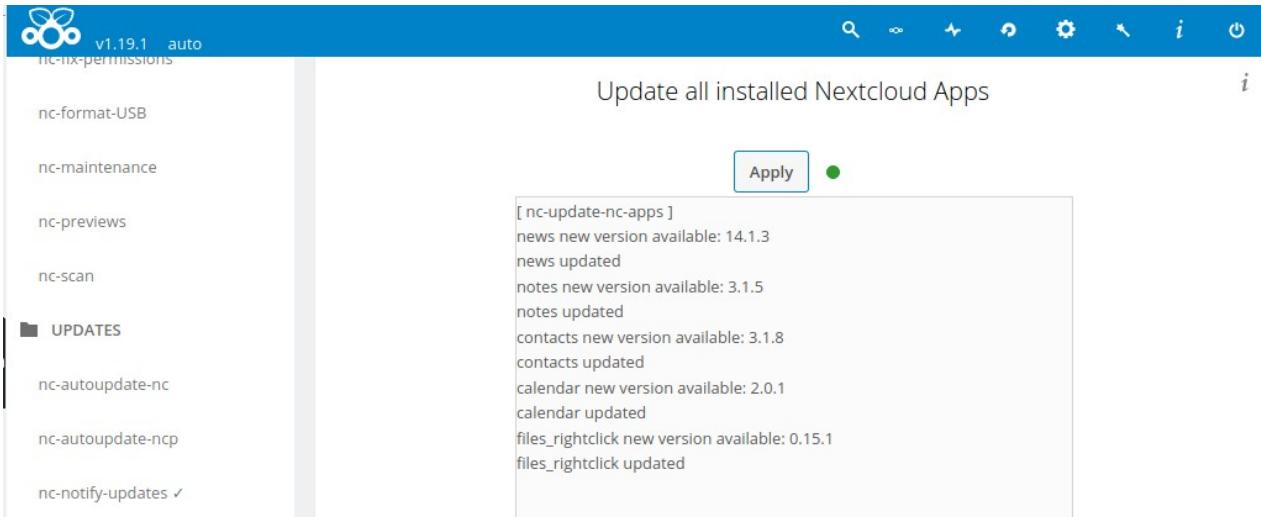
**Status Message:** [ nc-previews-auto ]  
Automatic preview generation enabled

# NextcloudPi Configuration - “UPDATES MENU”

1. Update all Nextcloud Apps installed

a) Go to “UPDATES” → “nc-update-nc-apps”

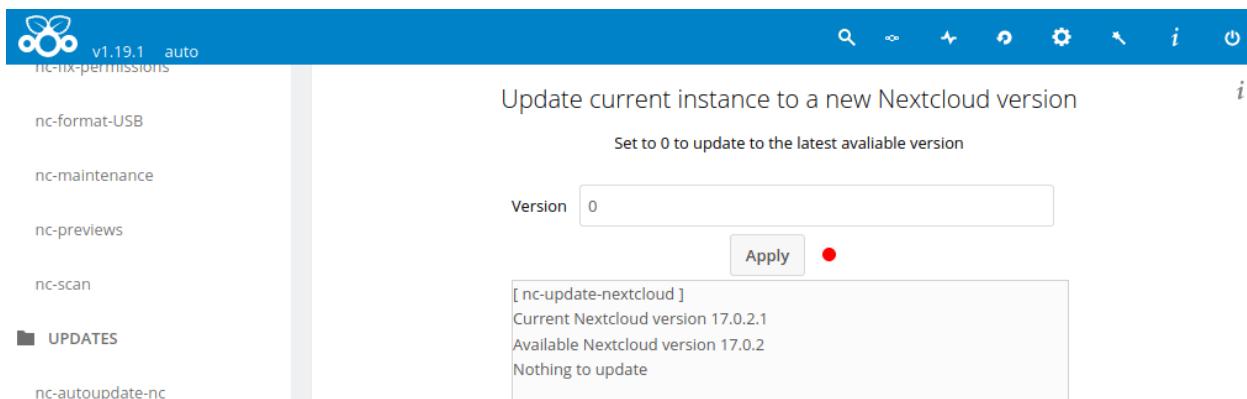
- Push “Apply”



2. Update the Nextcloud version

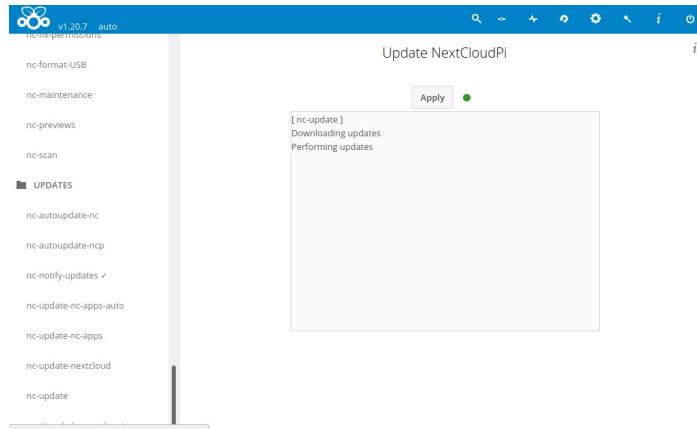
a) Go to “UPDATES” → “nc-update-nextcloud”

- Push “Apply”



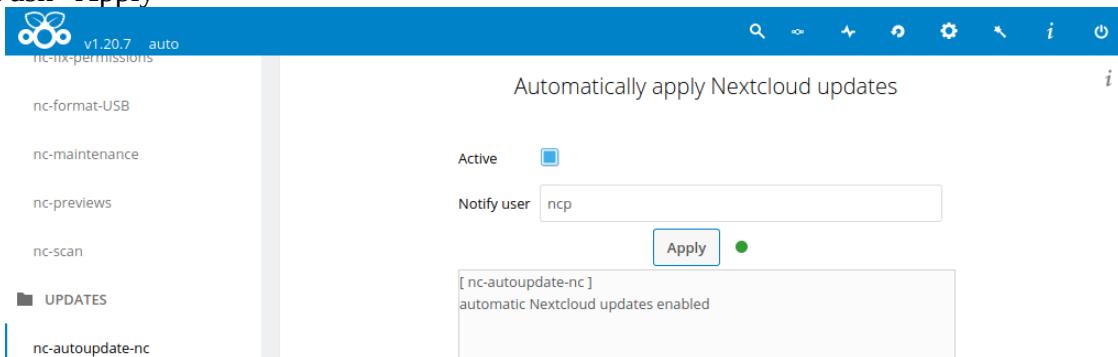
3. Perform a manual update of NextCloudPi

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



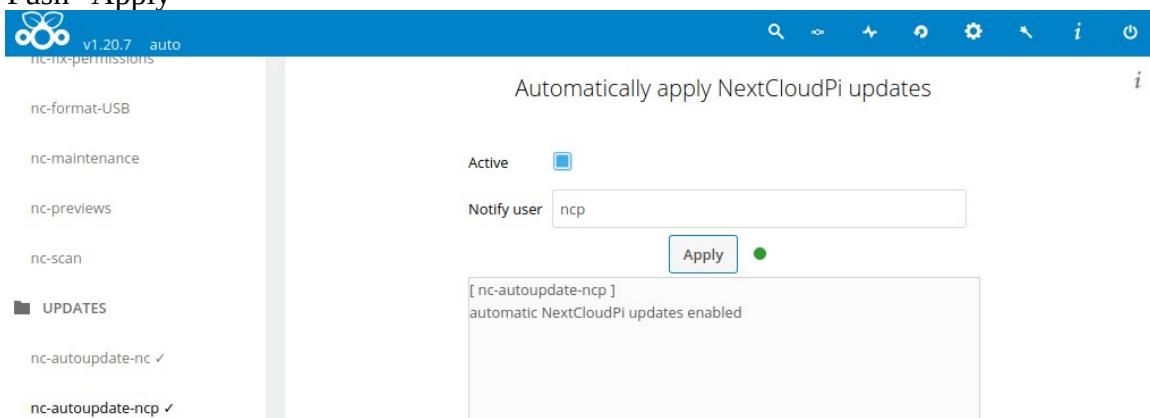
4. Automatically Nextcloud update

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



5. Automatically update NextCloudPi

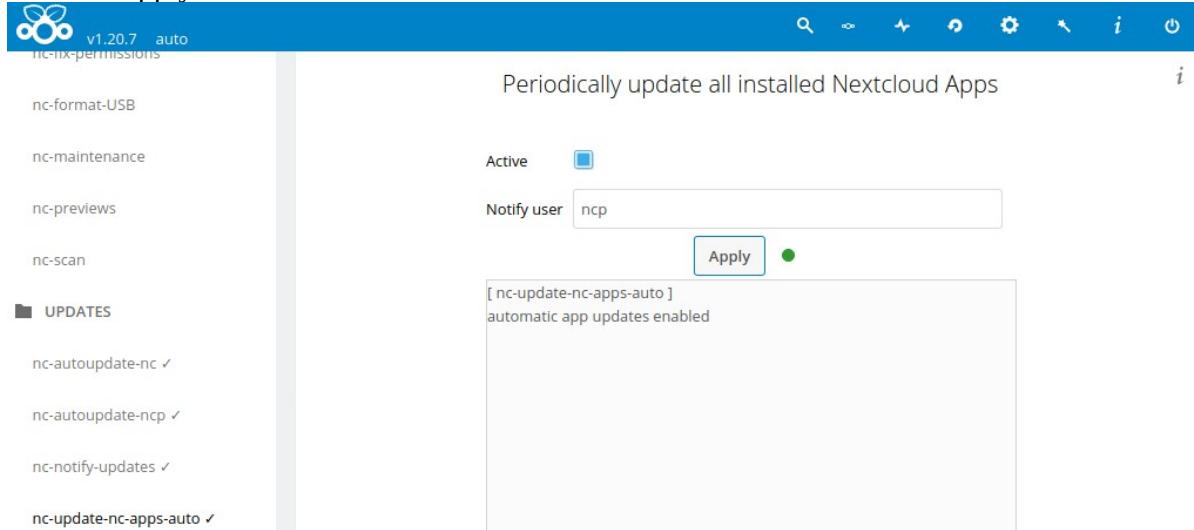
- a) Go to “UPDATE” → “nc-autoupdate-ncp”  
• “Active”: Activate  
• “Notify user”: *ncp*  
• Push “Apply”



6. Periodically update all installed Nextcloud Apps

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

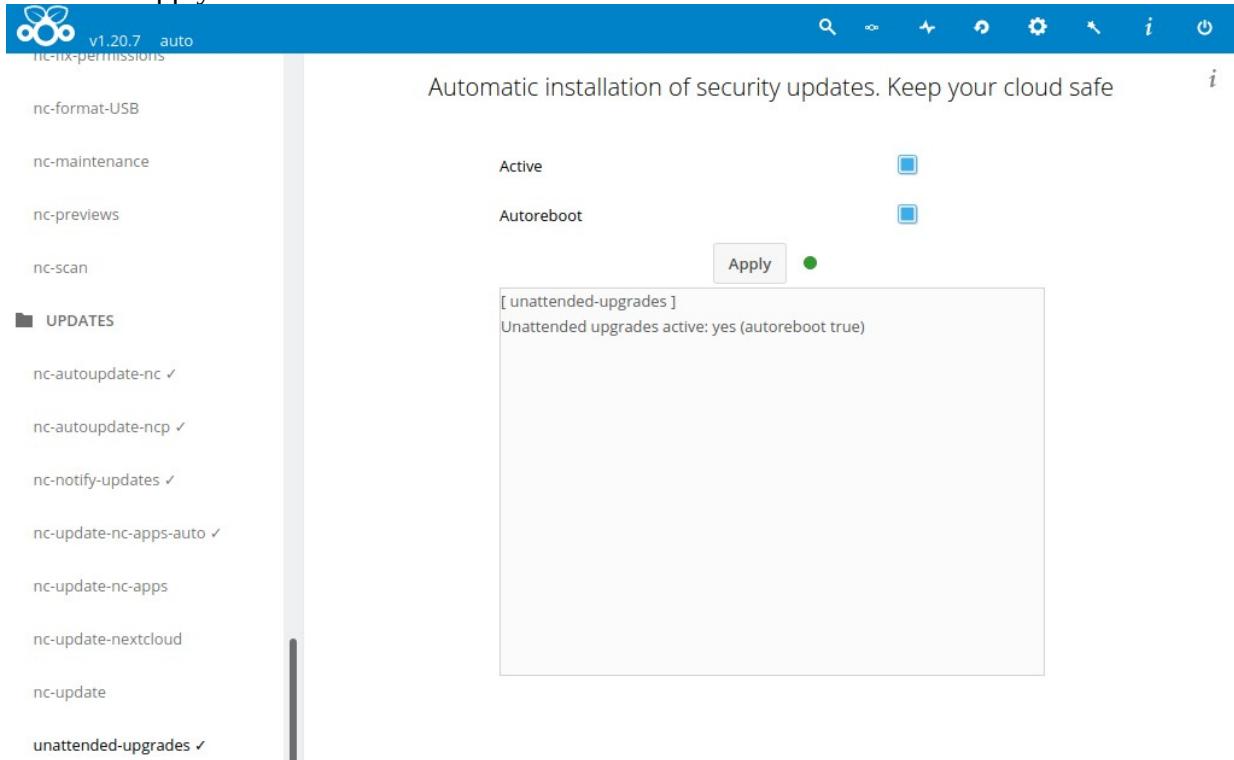
- “Active”: Activate
- “Notify user”: *ncp*
- Push “Apply”



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

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

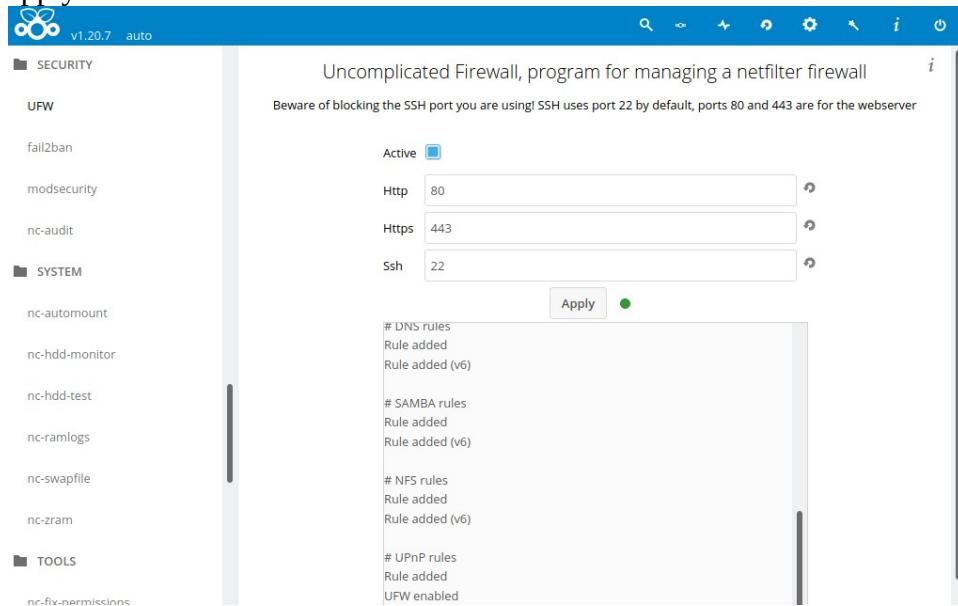
- “Active”: Activate
- “Autoreboot”: Activate
- Push “Apply”



# NextcloudPi Configuration - "SECURITY MENU"

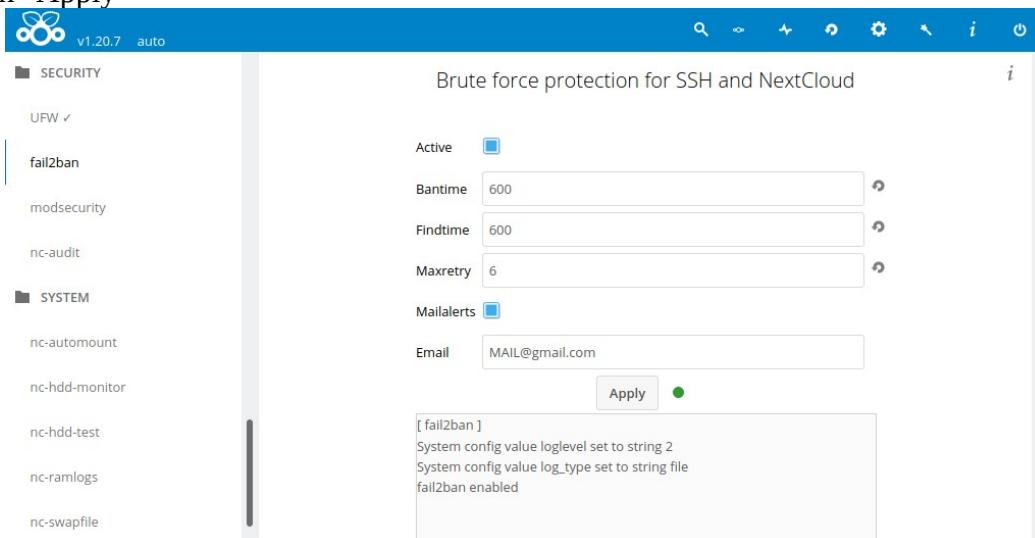
## 1. Activate Firewall (security)

- 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](mailto:MAIL@gmail.com)
    - After **6** wrong password in less than **600**, the system is blocked during **600** seconds.
  - Push "Apply"



# NextcloudPi Configuration - "SYSTEM MENU"

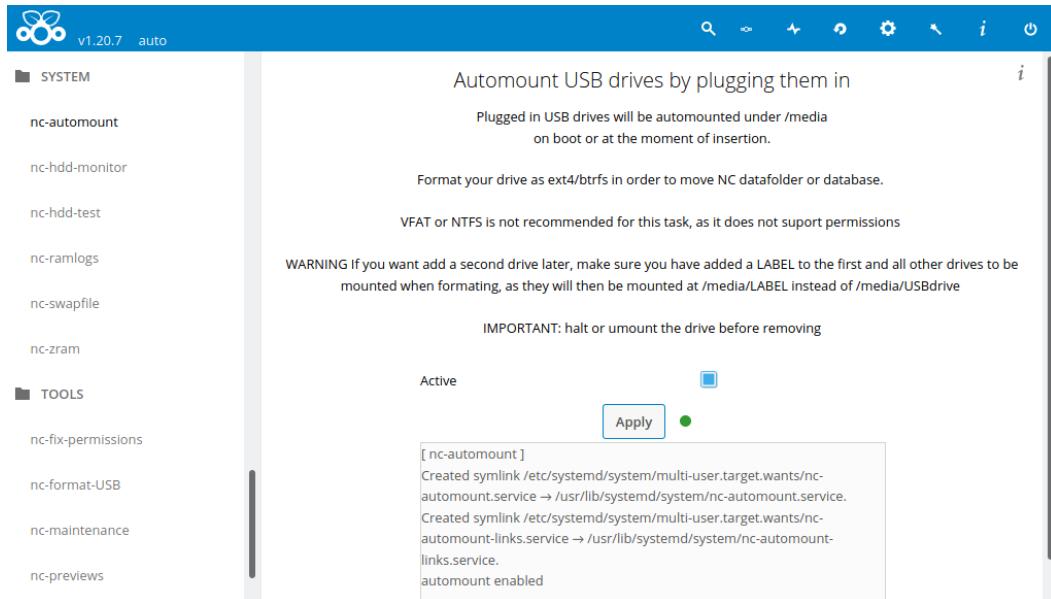
## 1. Mount automatically the USB

### a) Go to "SYSTEM" → "nc-automount"

- "Active": Activate

- Push "Apply"

- It will be mounted in: `/media`



## 2. Monitor HDD health automatically

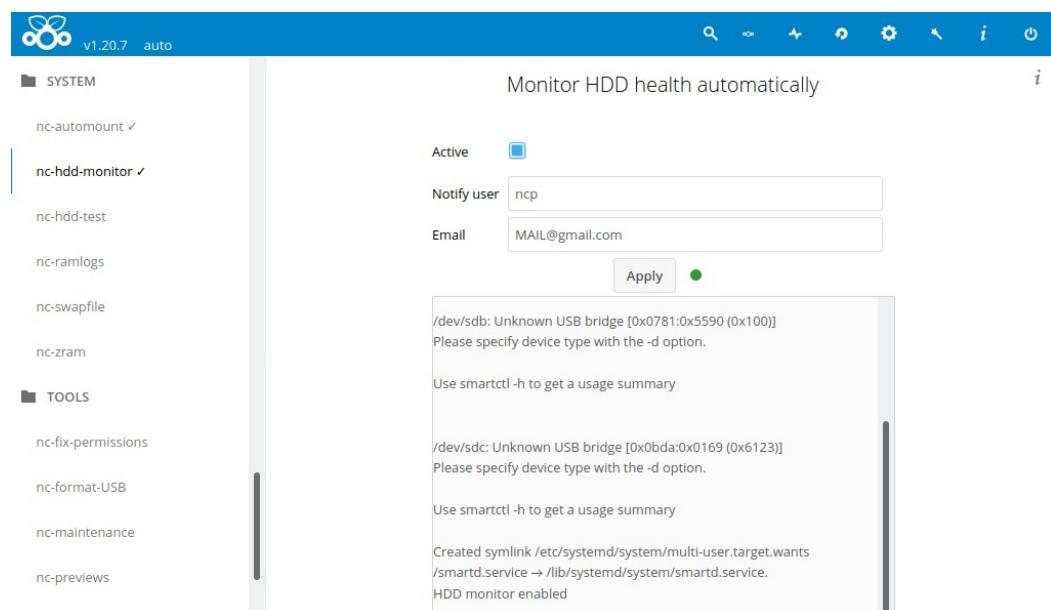
### a) Go to "SYSTEM" → "nc-hdd-monitor"

- "Active": Activate

- "Notify user": `ncp`

- "Email": [MAIL@gmail.com](mailto:MAIL@gmail.com)

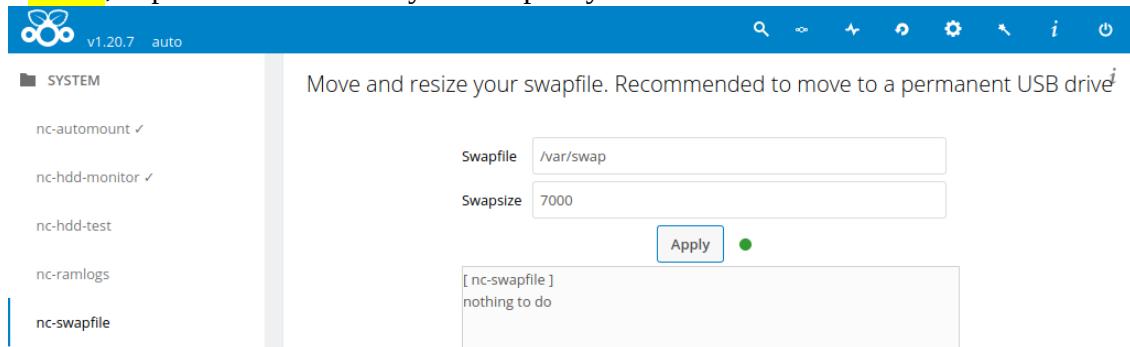
- Push "Apply"



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 interface with the title "v1.20.7 auto". On the left, there's a sidebar with options: BACKUPS (selected), nc-backup-auto (with a checkmark), nc-backup, nc-export-ncp, nc-import-ncp, nc-restore-snapshot, nc-restore, and nc-rsync-auto. The main area has a heading "Create BTRFS snapshot of the datadir". It says "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". There's a "Limit" input field set to "30" with an "Apply" button. A tooltip for [nc-snapshot] indicates "Maintenance mode enabled" and "Nextcloud is in maintenance mode - no apps have been loaded". Another tooltip for nc-restore shows "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 interface with the title "v1.20.7 auto". On the left, there's a sidebar with options: nc-rsync-auto (selected), nc-rsync, nc-snapshot-auto (with a checkmark), nc-snapshot-sync, nc-snapshot, and CONFIG. The main area has a heading "Scheduled datadir BTRFS snapshots". It shows an "Active" checkbox which is checked. An "Apply" button is below it. A tooltip for [nc-snapshot-auto] says "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”

Backup this NC instance to a file. This will always include the current Nextcloud directory and the Database. You can choose to include or exclude NC-data.

Destination directory: /RAID/ncp-data/ncp/files/ncp-backup path doesn't exist

Include data:

Compress:

Number of backups to keep: 30

Apply

[ nc-backup ]  
check free space...  
Maintenance mode enabled  
backup database...  
backup files...  
backup /RAID/ncp-data/ncp/files/ncp-backup/nextcloud-bkp\_20200413\_1586816048.tar.gz generated  
Maintenance mode disabled

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”

Set periodic backups

Active:

Destination Directory: /RAID/ncp-data/ncp/files/ncp-backup path doesn't exist

Include data:

Compress:

Backup periodicity (in days): 1

Number of backups to keep: 30

Apply

[ nc-backup-auto ]  
automatic backups enabled

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

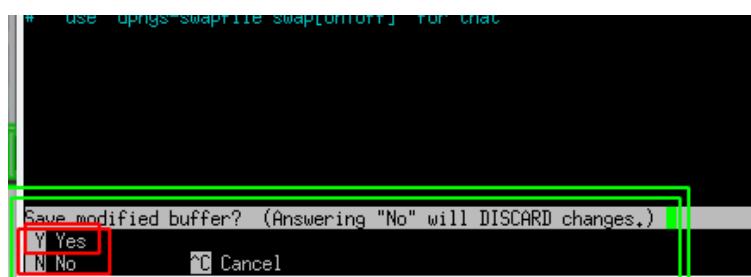
a) Open Putty

- 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

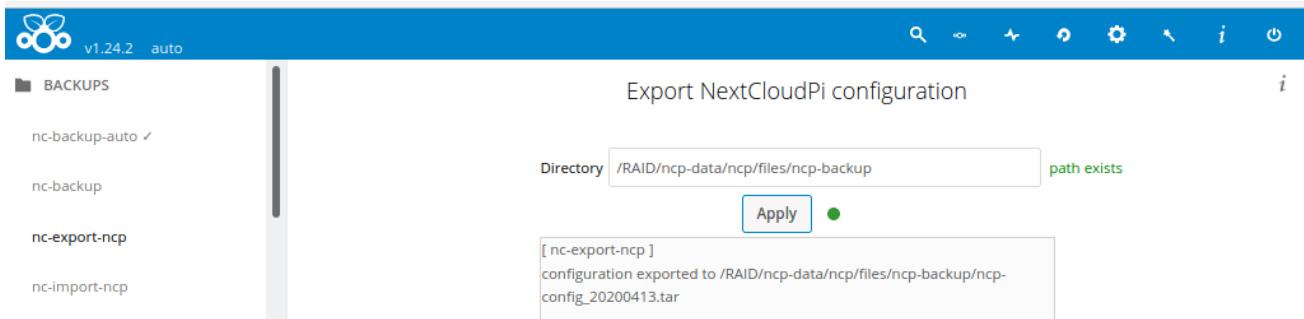
7. You can change the time of automatic poweroff, as explained before:

- 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, there's a navigation bar with links like 'Servidores', 'Public Cloud', 'Hosting' (which is highlighted), 'Messaging', and 'Enterprise'. Under the 'Hosting' section, there are several service categories: 'Dominios' (with a price of 0.99€ + IVA/año), 'Hosting y sitios web' (1.99€ + IVA/mes), 'Hosting Plesk' (12.99€ + IVA/mes), 'Correo electrónico' (0.99€ + IVA/mes), 'Office 365' (7.99€ + IVA/mes), and 'SSL Gateway / CDN'. To the right, a large pop-up window titled 'Reserve your domain' is displayed, showing a search bar with 'mypersonaldomain.ovh.in' and a 'Search' button. Below the search bar, there are two domain suggestions: 'pwskdhf.ovh' (Available) and 'sssssss.ovh' (Available). Each suggestion has a 'Price ex.VAT/1st year £2.99' and a blue shopping cart icon. At the bottom of the pop-up, there's a 'Skip this step' button. The main page also features 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 Service', 'Diamond Service', and 'Platinum Service', all of which are marked as 'Included'), and a 'Back' button at the bottom left and a 'Continue' button at the bottom right.

## 1. Configuration OVH count

- a) Open your count → *Domains* → *mypersonaldomain.ovh*
- b) 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 main content area 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.

- c) 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 +. A sidebar on the left indicates "There is no DynHost entry in the DNS zone." The main content area includes a search bar and a "Create a username" button (highlighted with a red box).

| ID | Zone | Sub-domain | Actions |
|----|------|------------|---------|
|    |      |            |         |

**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: \*

Subdomain: \*

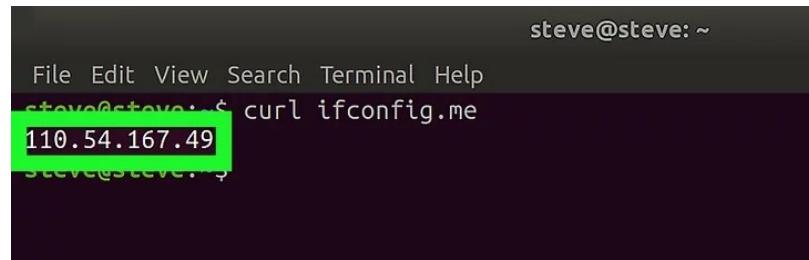
Enter a sub-domain or \* to manage all sub-domains with this login.

Password: \*

Confirmation: \*

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

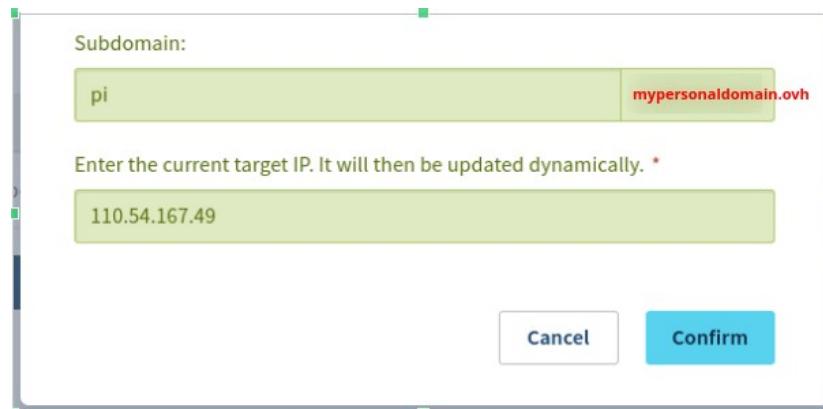
- Open Putty
- Write : *curl ifconfig.me*



```
steve@steve: ~
File Edit View Search Terminal Help
steve@steve: $ curl ifconfig.me
110.54.167.49
STEVE@STEVE: ~
```

e) Back to *DynHost* → Add a DynHost

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



Subdomain:

pi mypersonaldomain.ovh

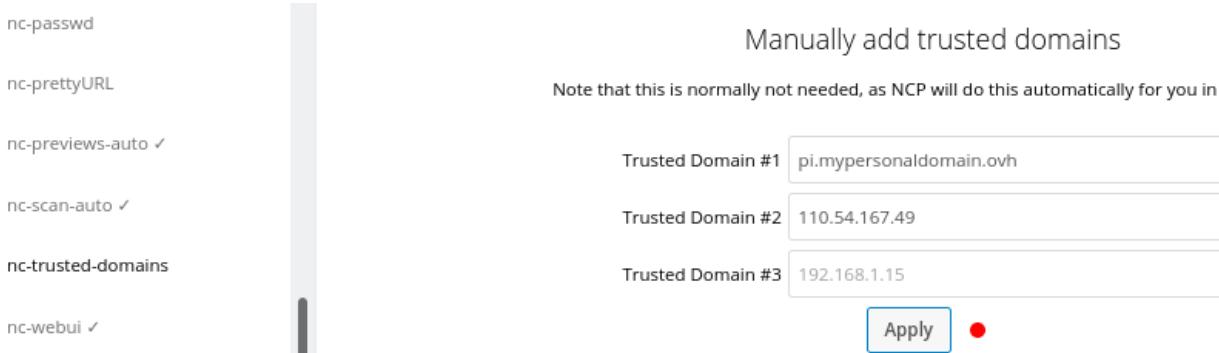
Enter the current target IP. It will then be updated dynamically. \*

110.54.167.49

Cancel Confirm

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**



Manually add trusted domains

Note that this is normally not needed, as NCP will do this automatically for you in most cases

Trusted Domain #1 pi.mypersonaldomain.ovh

Trusted Domain #2 110.54.167.49

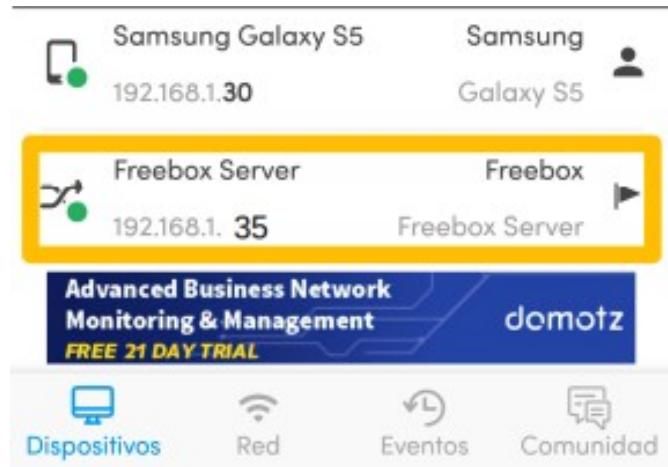
Trusted Domain #3 192.168.1.15

Apply

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

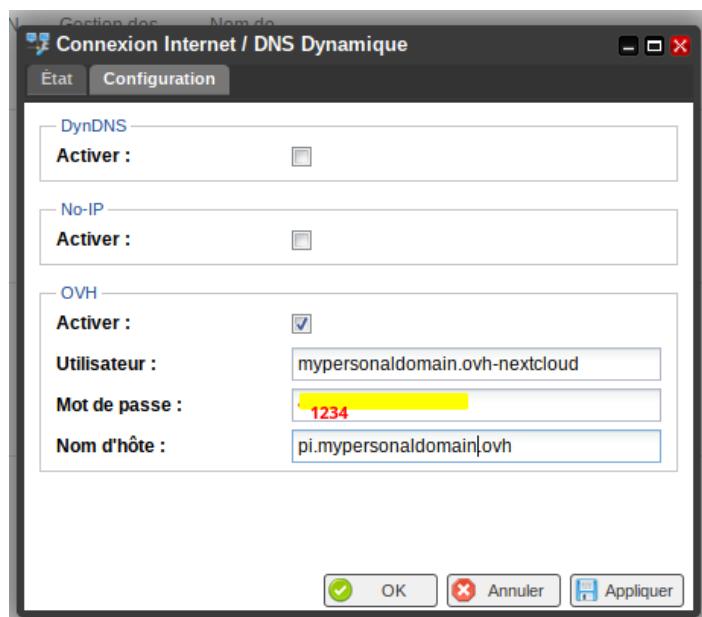
a) Now we will need to know the **router IP**

- 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)



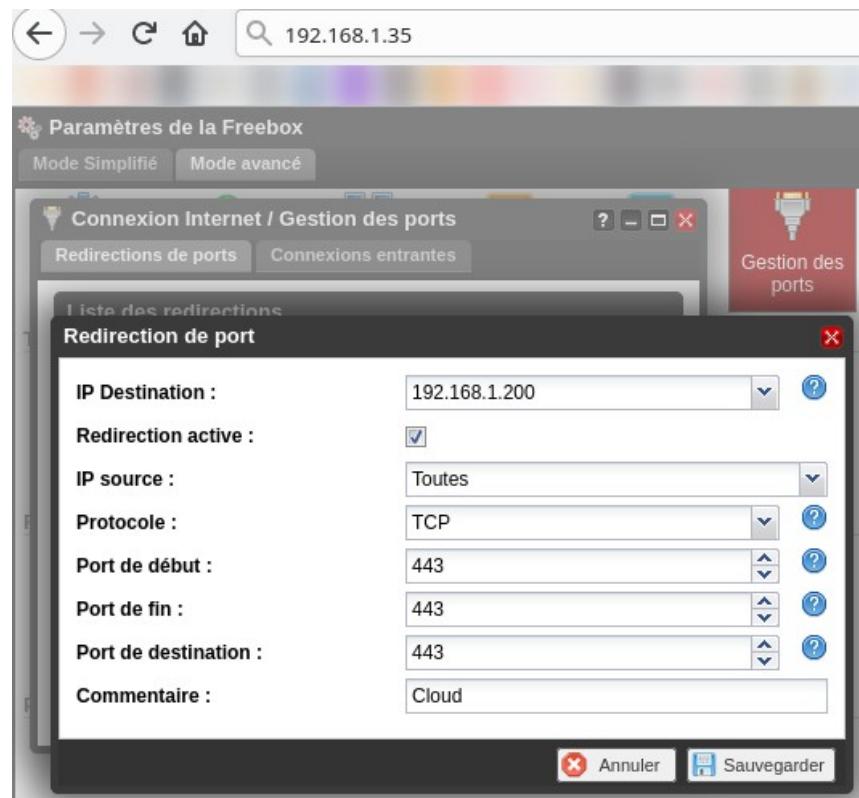
b) Write the **router IP** in to your navigator → *Parametres* → *DNS Dynamique* → *Configuration* → *OVH*:

- “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:

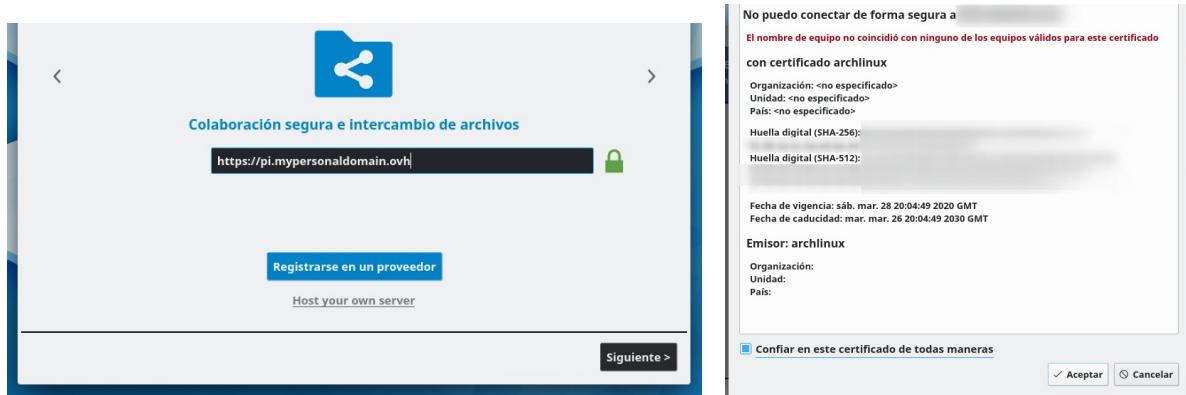
- a) sudo add-apt-repository ppa:nextcloud-devs/client
- b) sudo apt update
- c) sudo apt install nextcloud-client

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

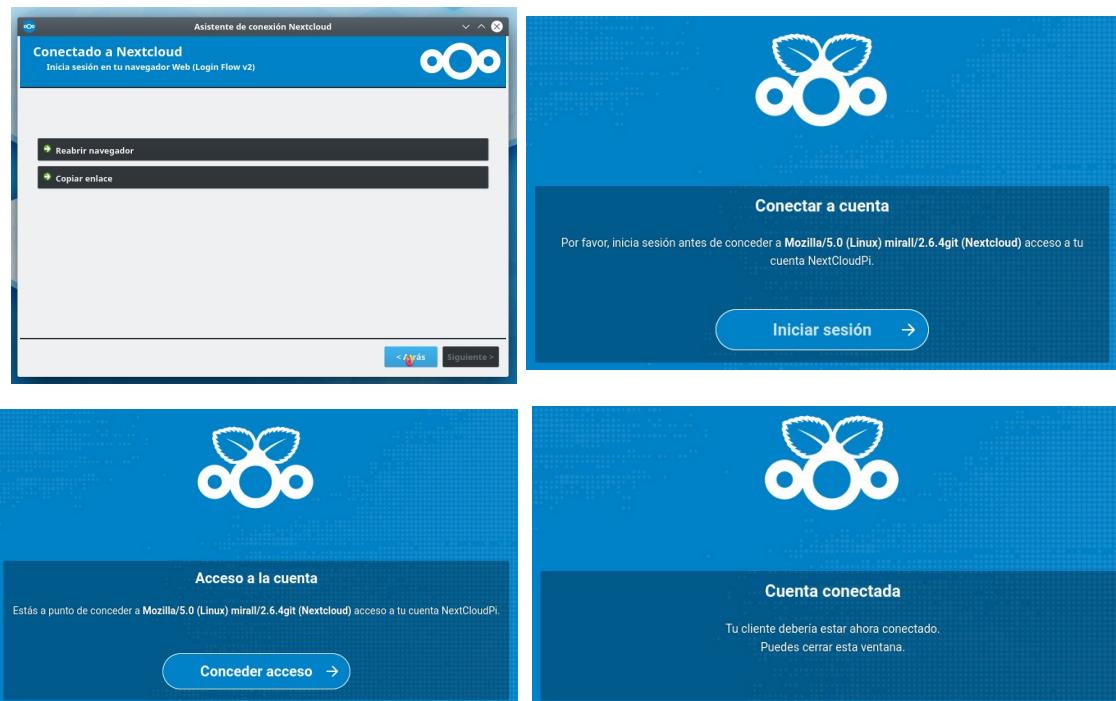
<https://nextcloud.com/install/#install-clients>

3. Open the Nextcloud client → Enter :

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

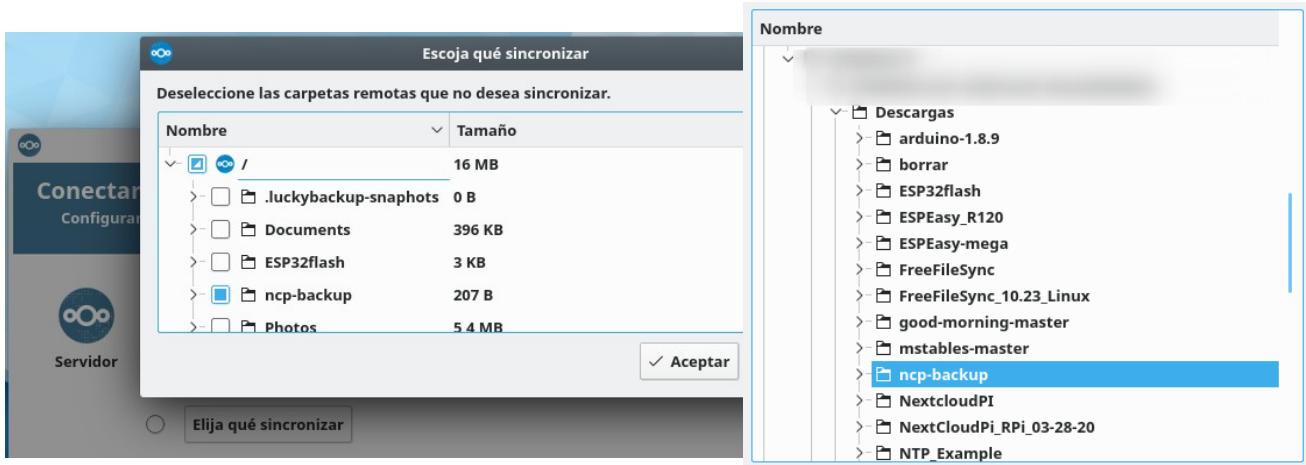


- d) The next windows will open the web navigator.
- e) Open your Nextcloud count and give the authorizations

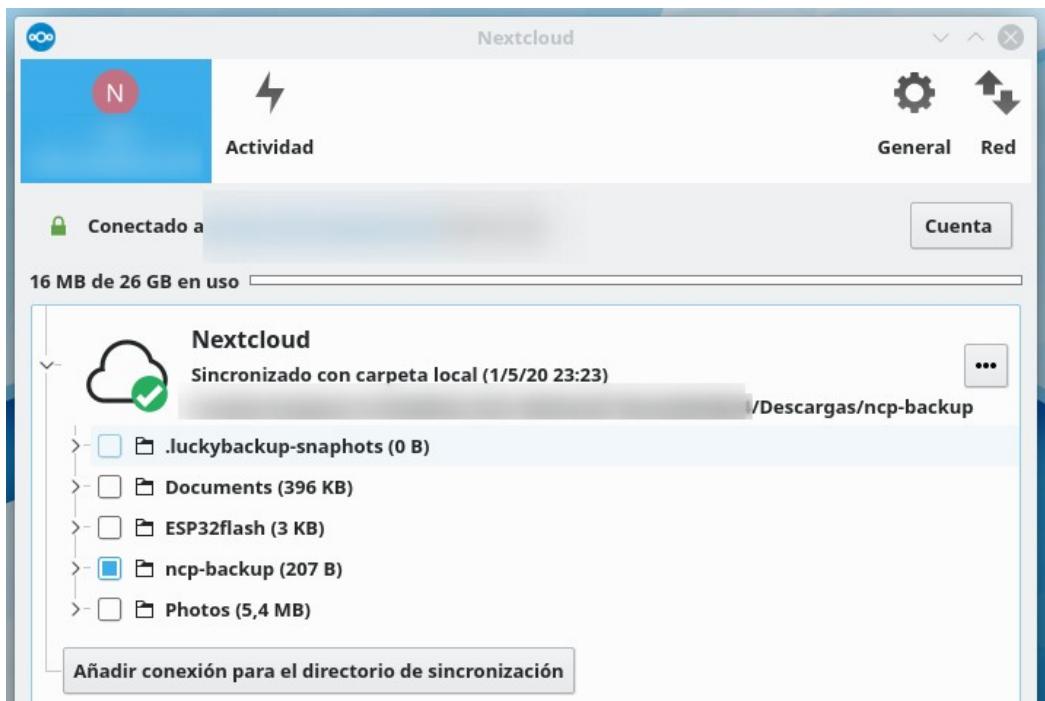


4. In my case, I sync my folders one by one

- 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