--START--

NextCloud Setup - Raspberry Pi !

Url’s used:

Rasbian

https://www.raspberrypi.org/downloads/raspbian/

Components:

- Raspberry Pi 3
- 32 GB SD Card
- USB Keyboard
- Monitor with HDMI
- 2TB External HDD (usb)

Steps:

Setup your raspberry Pi

1. Download the arm image from https://www.raspberrypi.org/downloads/raspbian/
2. Extract the image from the file you have downloaded.
3. Flash your SD Card with the image you extracted using Etcher. (Or your preferred tool)
4. Remove the SD Card from your computer and insert it into the Raspberry Pi.
5. Connect all the components to the Raspberry Pi and power it on
6. Complete the usual installation / configuration steps. (https://www.raspberrypi.org/documentation/installation/installing-images/README.md)
7. Set a static IP. We will use 192.168.1.253 for our lab demosud.
8. ssh to your raspberry pi and follow the below sections.

Preparing the External HDD (usb)

1. Before you plug in the usb disk, Tail the messages file with the command below:

~$ tail -f /var/log/messages l grep disk

Our output:

```
pi@hgncprdsrv:~ $ tail -f /var/log/messages | grep disk
Jan  4 16:56:14 hgncprdsrv kernel: [ 7381.871983] sd 0:0:0:0: [sda] Attached SCSI disk
```

We now know that the disk is on ## /dev/sda

2. Let us now create a partition.

~$ sudo fdisk /dev/sda

Our inputs used in order (m l d l F l n l y l w)

Visual below:

hendgrow — pi@hgncprdsrv: ~ —

```
Command (m for help): m

Help:

  GPT
   M   enter protective/hybrid MBR

  Generic
   d   delete a partition
   F   list free unpartitioned space
   l   list known partition types
   n   add a new partition
   p   print the partition table
   t   change a partition type
   v   verify the partition table
   i   print information about a partition

  Misc
   m   print this menu
   x   extra functionality (experts only)

  Script
   I   load disk layout from sfdisk script file
   O   dump disk layout to sfdisk script file

  Save & Exit
   w   write table to disk and exit
   q   quit without saving changes

  Create a new label
   g   create a new empty GPT partition table
   G   create a new empty SGI (IRIX) partition table
   o   create a new empty DOS partition table
   s   create a new empty Sun partition table


Command (m for help): d

Selected partition 1
Partition 1 has been deleted.

Command (m for help): F
Unpartitioned space /dev/sda: 1.8 TiB, 2000397868032 bytes, 3907027086 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes

Start        End    Sectors  Size
 2048 3907029133 3907027086  1.8T

Command (m for help): n
Partition number (1-128, default 1):
First sector (34-3907029133, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-3907029133, default 3907029133):

Created a new partition 1 of type 'Linux filesystem' and of size 1.8 TiB.
Partition #1 contains a ext4 signature.

Do you want to remove the signature? [Y]es/[N]o: y

The signature will be removed by a write command.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

pi@hgncprdsrv:~ $
```

2. Create the filesystem.

~$ sudo mkfs -t ext4 /dev/sda1

3. Create a directory to test the mount.

~$ sudo mkdir /mnt/NCSTORE

4. Verify the disk is able to mount

~$ sudo mount /dev/sda1 /mnt/NCSTORE

5. list the currently mounted disks.

~$ df -lh

You should see the volume mounted:

```
pi@hgncprdsrv:~ $ df -lh
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        30G  6.6G   22G  24% /
devtmpfs        459M     0  459M   0% /dev
tmpfs           464M     0  464M   0% /dev/shm
tmpfs           464M  6.2M  457M   2% /run
tmpfs           5.0M  4.0K  5.0M   1% /run/lock
tmpfs           464M     0  464M   0% /sys/fs/cgroup
/dev/mmcblk0p1  253M   53M  200M  21% /boot
/dev/sda1       1.8T   77M  1.7T   1% /mnt/NCSTORE
tmpfs            93M     0   93M   0% /run/user/1000
pi@hgncprdsrv:~ $
```

6. If all working as expected, edit the /etc/fstab to make the mount permanent. As per our example we added the following line:

Update the installation.

~$ sudo apt-get update

~$ sudo apt-get upgrade

MariaDB Install & DB / User creation.

1. Install MariaDB and secure it.

~$ sudo apt install mariadb-server

~$ sudo mysql_secure_installation

Our inputs used in order (y l y l y l y l y)

Don't forget the password you set during this step!

```
pi@hgncprdsrv:~ $ sudo mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
      SERVERS IN PRODUCTION USE!  PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user.  If you've just installed MariaDB, and
you haven't set the root password yet, the password will be blank,
so you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password ensures that nobody can log into the MariaDB
root user without the proper authorisation.

You already have a root password set, so you can safely answer 'n'.

Change the root password? [Y/n] y
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
 ... Success!


By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for
them.  This is intended only for testing, and to make the installation
go a bit smoother.  You should remove them before moving into a
production environment.

Remove anonymous users? [Y/n] y
 ... Success!

Normally, root should only be allowed to connect from 'localhost'.  This
ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
 ... Success!

By default, MariaDB comes with a database named 'test' that anyone can
access.  This is also intended only for testing, and should be removed
before moving into a production environment.

Remove test database and access to it? [Y/n] y
 - Dropping test database...
 ... Success!
 - Removing privileges on test database...
 ... Success!

Reloading the privilege tables will ensure that all changes made so far
will take effect immediately.

Reload privilege tables now? [Y/n] y
 ... Success!

Cleaning up...

All done!  If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
```

Create the NextCloud Database & DB user

1. Login to the SQL server and provide the password you set in the previous step.

~$ sudo mysql -u root -p

2. Create the Database to be used by NexCloud

CREATE DATABASE ncdb;

3. Create the user we will use to access the DB we just created

CREATE USER 'ncdbuser'@'localhost' IDENTIFIED BY 'yourpasswordhere';

4. Grant the user permissions to use the DB we created

GRANT ALL PRIVILEGES ON ncdb. TO 'ncdbuser'@'localhost';*

5. Finalize the setting with

FLUSH PRIVILEGES;

Install NextCloud

1. Install Apache, PHP & PHP SQL Connector.

~$ sudo apt-get install apache2 php-mysql php7.3 php7.3-gd php7.3-curl php7.3-zip php7.3-xml php7.3-mbstring

2. Now restart Apache

~$ sudo service apache2 restart

3. Fetch NextCloud and extract it.

At the time of this walk through version nextcloud-17.0.2. is the most current.

To view what is available see: https://download.nextcloud.com/server/releases/

~$ cd /var/www/html

~$ curl https://download.nextcloud.com/server/releases/nextcloud-17.0.2.tar.bz2 | sudo tar -jxv

4. We need to set the correct permissions

~$ sudo chown -R www-data:www-data /var/www/html/nextcloud/

~$ sudo chown -R www-data:www-data /mnt/NCSTORE

~$ sudo chmod 750 /mnt/NCSTORE

5. Open your browser and navigate to your Raspberry pi ip/nextcloud

http://192.168.1.253/nextcloud

6. Enter the details requested.

Create an **admin account**

HGLABAdmin

•••••

Very weak password

Storage & database ▾

Data folder

/mnt/NCSTORE

Configure the database

Only MySQL/MariaDB is available. Install and activate additional PHP modules to choose other database types.
For more details check out the documentation. ↗

ncdbuser

yourpasswordhere

ncdb

localhost

Please specify the port number along with the host name (e.g., localhost:5432).

Finish setup

HendGrow walk-through Video

https://hendgrow.com/2020/01/04/nextcloud-setup-raspberry-pi/

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https://hendgrow.com/disclaimer/