# Initial tasks

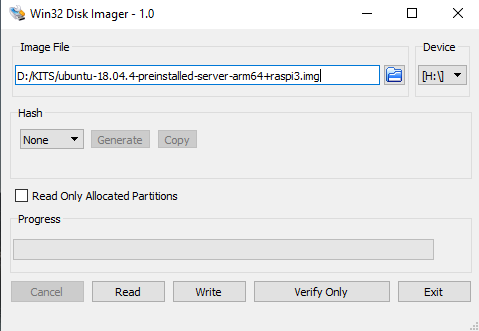
Download ubuntu 64 bits. At the time of this paper, I got it from : <https://wiki.ubuntu.com/ARM/RaspberryPi>

But you will easily find many other sites.

I chose that one:



Unzip and copy on a 32 or 64 GB SDcard. A 16 GB is enough but plan for future…



# Console work

Boot the raspberry on this card

Change password when requested. French users, beware, at this point you’re on a qwerty keyboard. So, choose a simple password easy to enter for example, azertyui, which is in fact qwertyui. You’ll change it later.

Log in and switch the keyboard to French with this command:

*$ sudo loadkeys fr*

Edit this file: /etc/default/keyboard and change XKBLAYOUT from “us” to “fr”.

With ubuntu 18.04 LTS, we’re going to use netplan to manage the network.

1st, disable the wpa\_supplcant service:

*$ sudo systemctl stop wpa\_supplicant*

*$ sudo systemctl disable wpa\_supplicant*

Change root password and log in as root. This is not a recommended practice, but we’ll do that to facilitate commands usage. Optionally you can even allow remote root user access. This further raise your system exposition to security attacks!

Check system date.

***$ date***

If wrong set time, date and location with standard Linux commands.

***root@zerasp:~# timedatectl set-timezone Europe/Paris***

Set the hostname you want by editing /etc/hostname

Create /etc/wpa\_supplicant.conf with this command:

***$ wpa\_passphrase yourSSID youPASS > /etc/wpa\_supplicant.conf***

Open /etc/netplan/50-cloud-init.yaml (maybe the file name could change)

Put this into the file for the pi4 WIFI interface wlan0

*wifis:*

*wlan0:*

*dhcp4: no*

*optional: true*

*addresses: [192.168.47.168/24]*

*gateway4: 192.168.47.254*

*access-points:*

*"network\_ssid\_name":*

*password: "\*\*\*\*\*\*\*\*\*\*"*

Then generate the netplan files

*$ netplan –debug generate*

*$ netplan –debug apply*

Check with systemctl the netplan service has been installed.

*$ systemctl status*

*$ reboot*

You should now have access remotely to the pi 4 through its wifi interface.

You can then set parameters for the ethernet interface in case you plan to use it.

Add this to your /etc/netplan/ yaml file.

Next step is mongodb installation.

1st add a mongo group. And then a mongo user. (of course, you can use any group and user name you prefer).

***$ mkdir /home/mongo***

***$ mkdir /home/node***

***$ chown node.node /home/node***

***$ chown mongo.mongo /home/mongo***

***$ group add mongo***

***$ useradd mongo -g mongo -G sudo -d /home/mongo -p yourmongopass -s /bin/bash***

Also create a node group and a node account to host our nodejs environment.

***$ group add node***

***$ useradd node -g node -G sudo -d /home/node -p yournodepass -s /bin/bash***

Check you can access these accounts with the desired passwords.

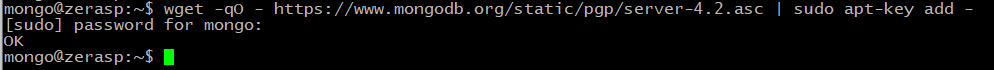
At this point, you can install mongodb. Log in remotely with a ssh client like putty or MobaXterm, to take advantage of copy / paste capabilities, as some commands are boring to enter manually.

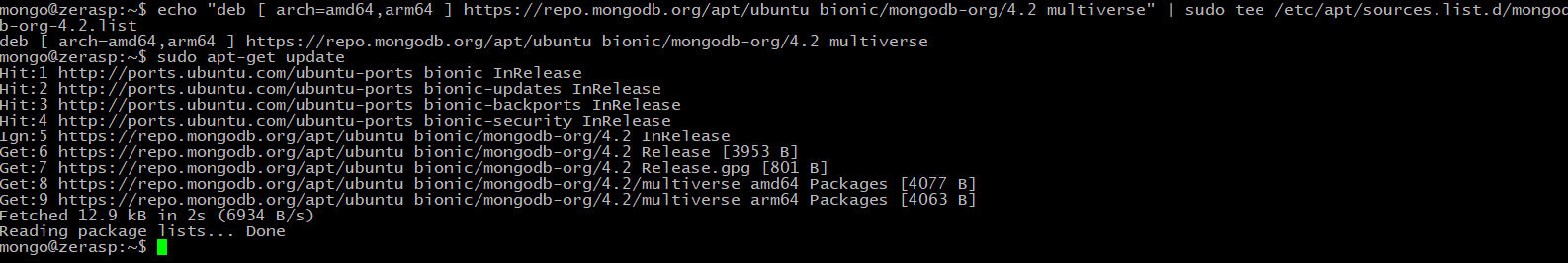
# SSH client work

Install mongodb

Go to this site. <https://docs.mongodb.com/manual/tutorial/install-mongodb-on-ubuntu/>

Just follow the described procedure. It should run fine.



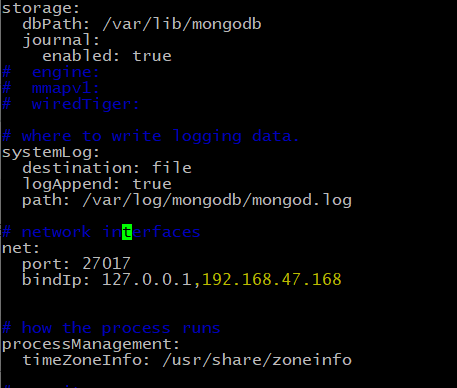


And install mongodb.

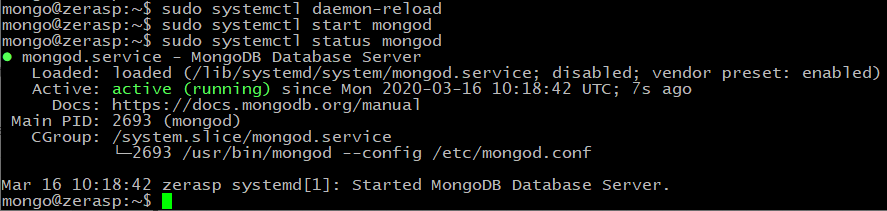
***$ sudo apt-get install -y mongodb-org***

At the time of this paper, this is the 4.2 version.

After the install edit /etc/mongod.conf. Add an address for your mongodb listener.



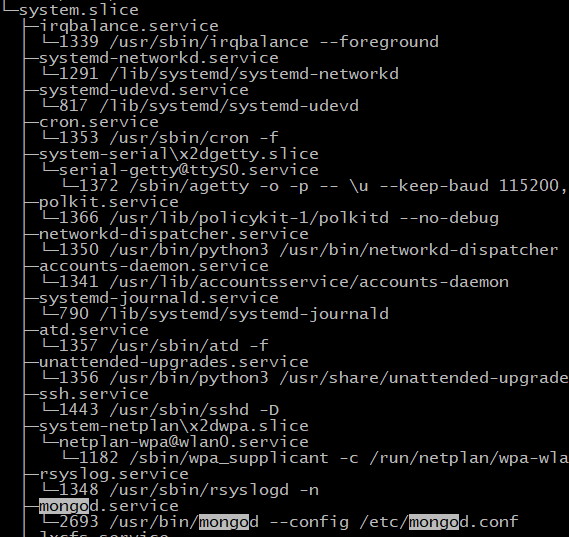
This is not mandatory. But in case you want to remotely access your mongodb with a client like compass, it will be helpful. To start the mongodb server, use these commands:



You can see the service is disabled. Enable the mongod service:

***$ sudo systemctl enable mongod***

Next reboot will bring the service up automatically. You can check the service is registered (systemctl status)



Reboot now to check mongodb is started after boot. Just simply run mongo from the mongo account. You can also check with a client tool if you listen on a public address. Here we use Compass free tool.

