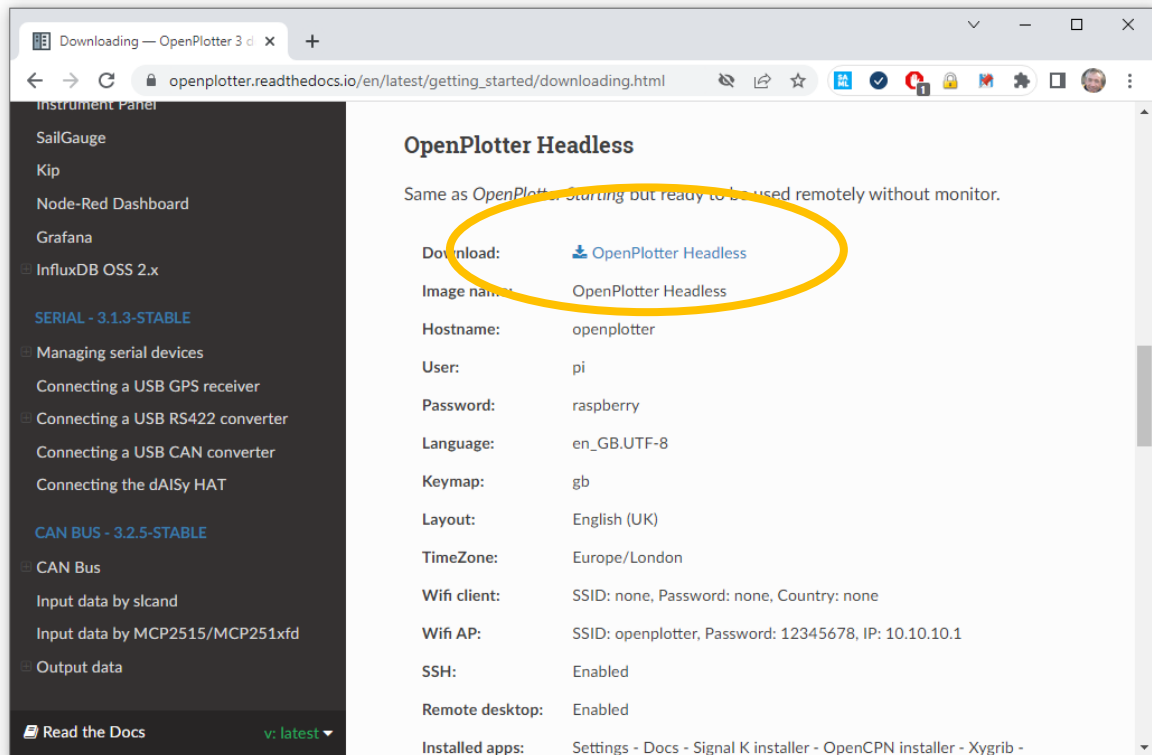
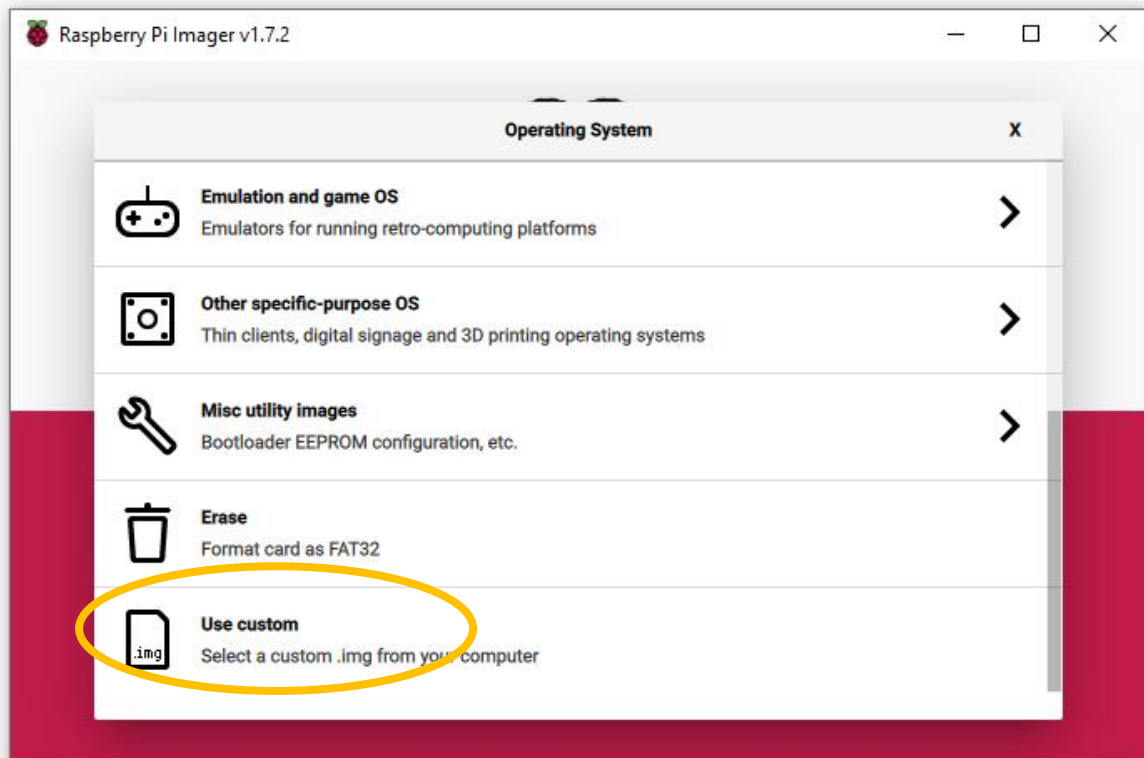


Pyplot 0.35 on Openplotter 3.0 version 04-SEP-2022

1. First, browse to https://openplotter.readthedocs.io/en/latest/getting_started/downloading.html and download the Openplotter Headless image. Since I tested on a raspberry 3b+, I downloaded the 32-bit version. On a raspberry 4, I would do the same.



- Then, download the raspberry pi imager, click Operating System , scoll to Use Custom, and choose your downloaded image file.

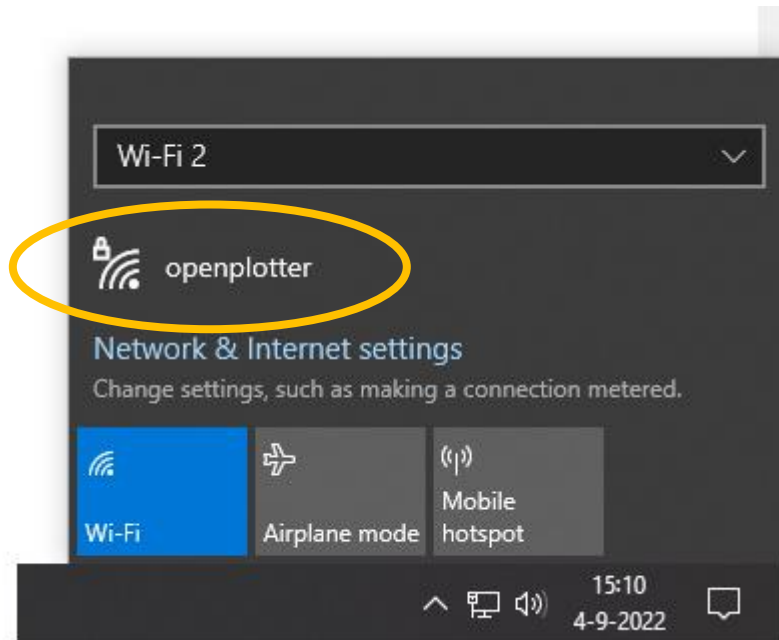


3. Stick an SD card adapter with an SD card in your USB port, then for Storage, choose the SD card.



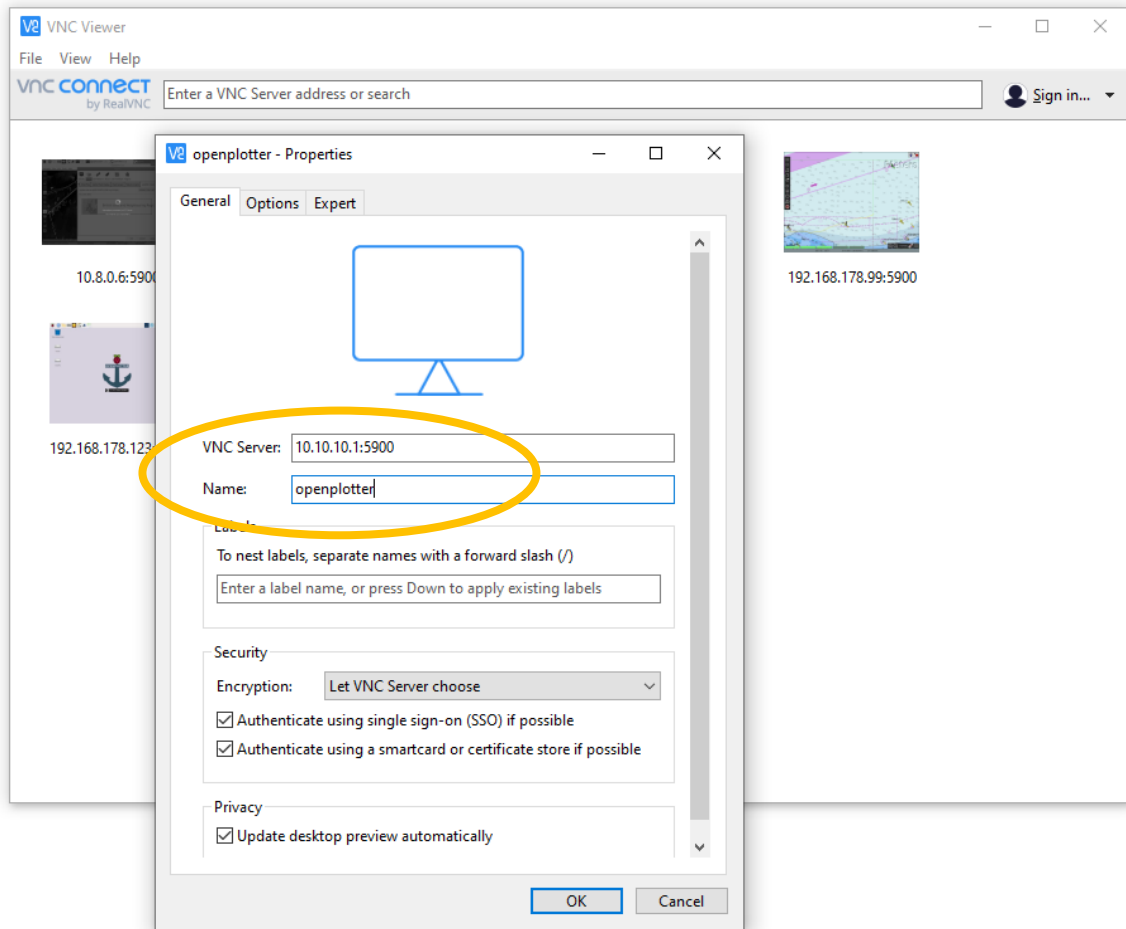
4. Click Write to burn the image on your SD card.
5. When ready, stick the SD card in your raspberry and turn on the raspberry.

6. After a while, you should see a wifi station appear called openplotter. Connect to it. The wifi passphrase is 12345678.
7. Note: if you have connected before, and/or have problems connecting, it might help to Forget the device credentials.



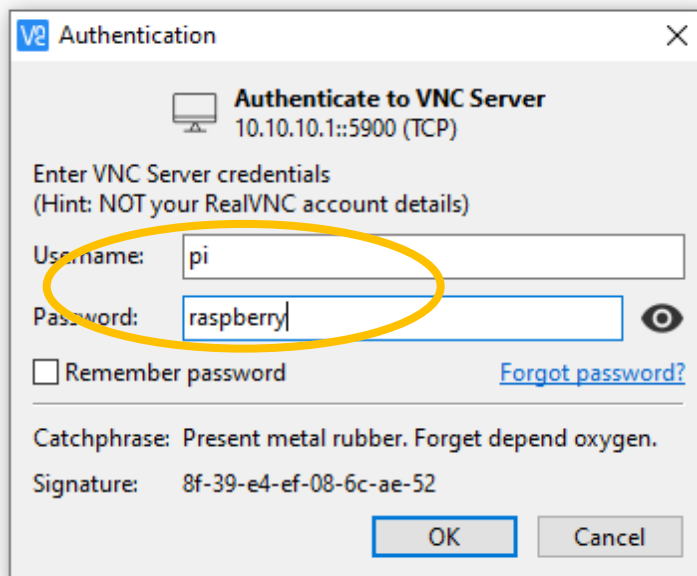
Note: if you have no internet connection to the raspberry (see later) the wifi connection might disconnect after a few seconds. Reconnect to it. You should get a 10.10.10.0 ip address.

- Download a vnc viewer from the internet. In this example, RealVNC Viewer is used. Make a new connection with File → New Connection. Select 10.10.10.1:5900 for VNC Server:



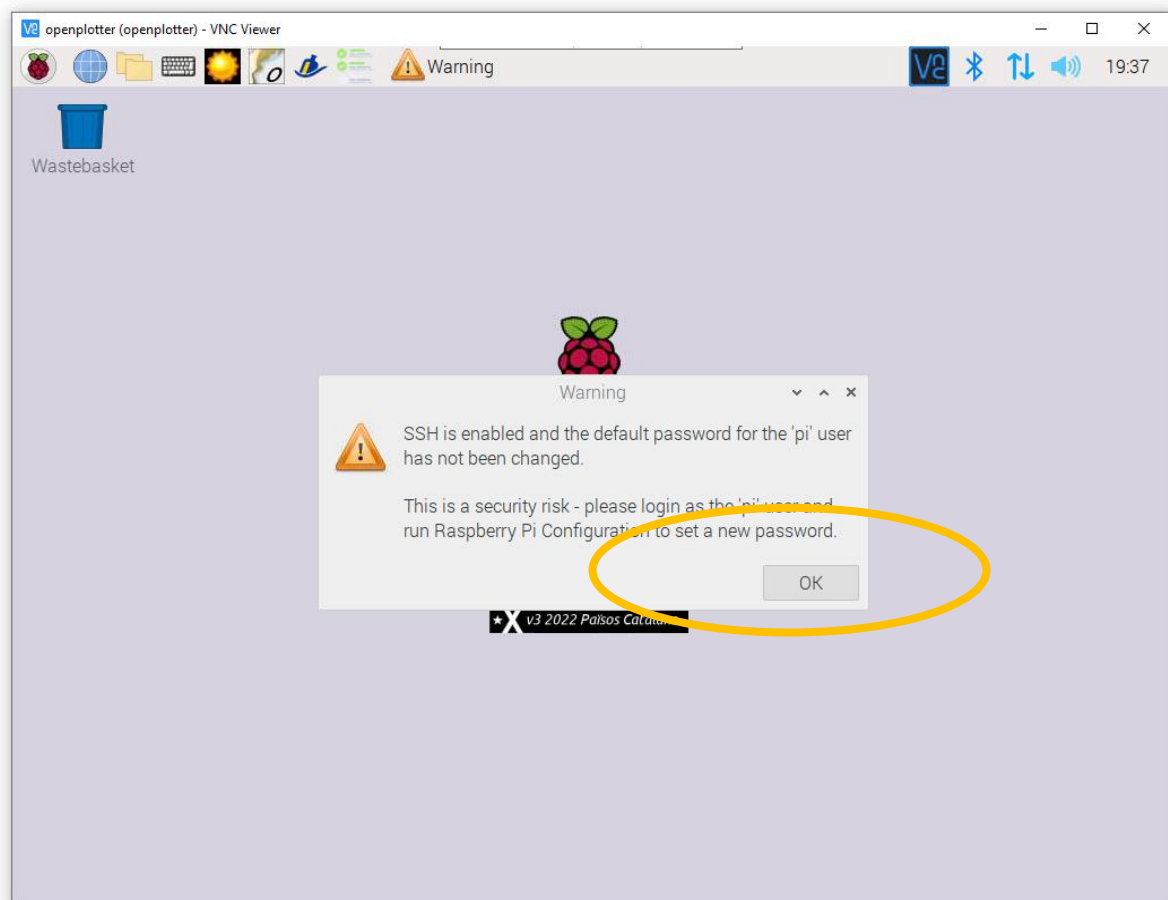
- Press ok and the connect to the machine.

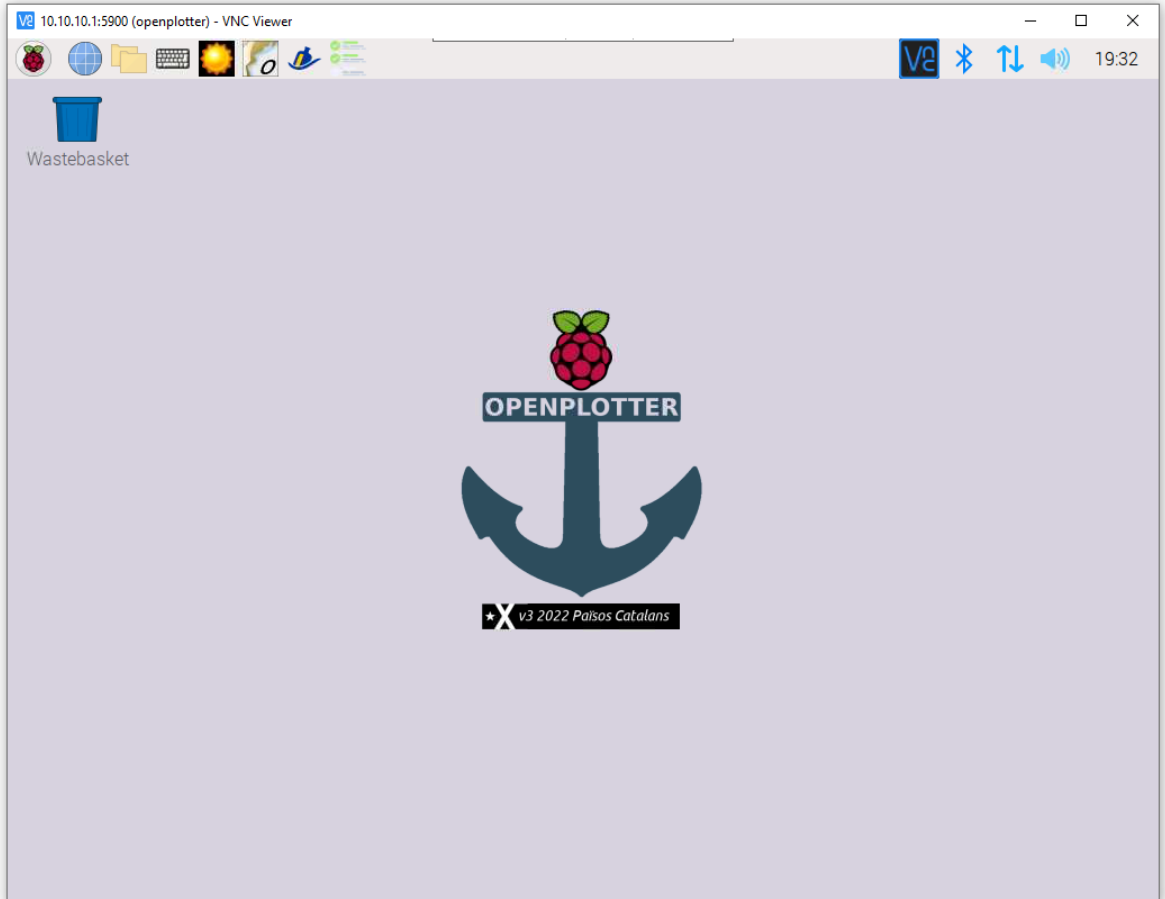
10. Default credentials to be used are the unix credentials of the pi user, in this case pi and raspberry as indicated below:



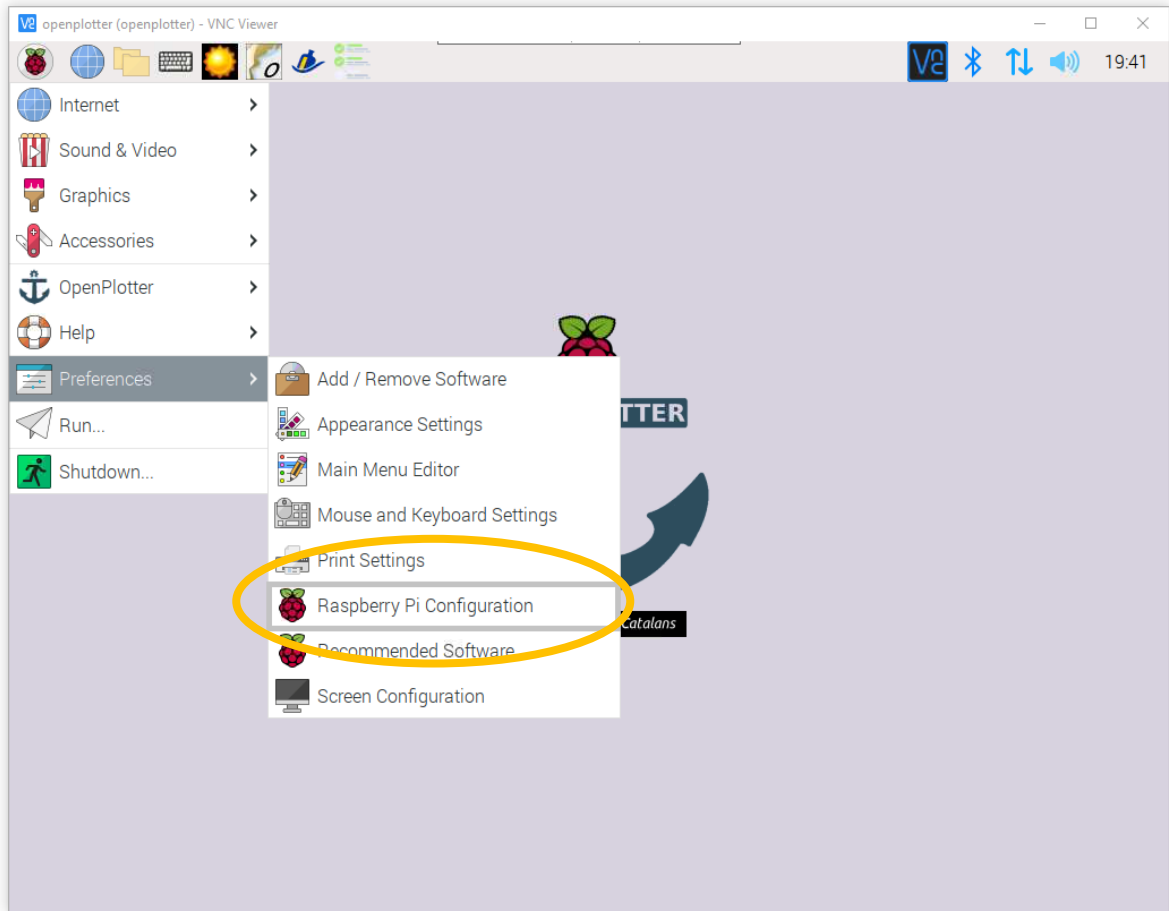
The image shows a screenshot of a VNC Authentication dialog box. The window title is "v2 Authentication" and it has a close button (X) in the top right corner. The main heading is "Authenticate to VNC Server" with a sub-heading "10.10.10.1::5900 (TCP)". Below this, it says "Enter VNC Server credentials" and provides a hint: "(Hint: NOT your RealVNC account details)". There are two input fields: "Username:" with the text "pi" and "Password:" with the text "raspberry". A yellow oval highlights both the username and password fields. Below the password field is a checkbox labeled "Remember password" and a link "Forgot password?". At the bottom, there is a "Catchphrase:" field with the text "Present metal rubber. Forget depend oxygen." and a "Signature:" field with the text "8f-39-e4-ef-08-6c-ae-52". At the very bottom are "OK" and "Cancel" buttons.

11. If all is right, this screen should show up. Read the message and click ok:

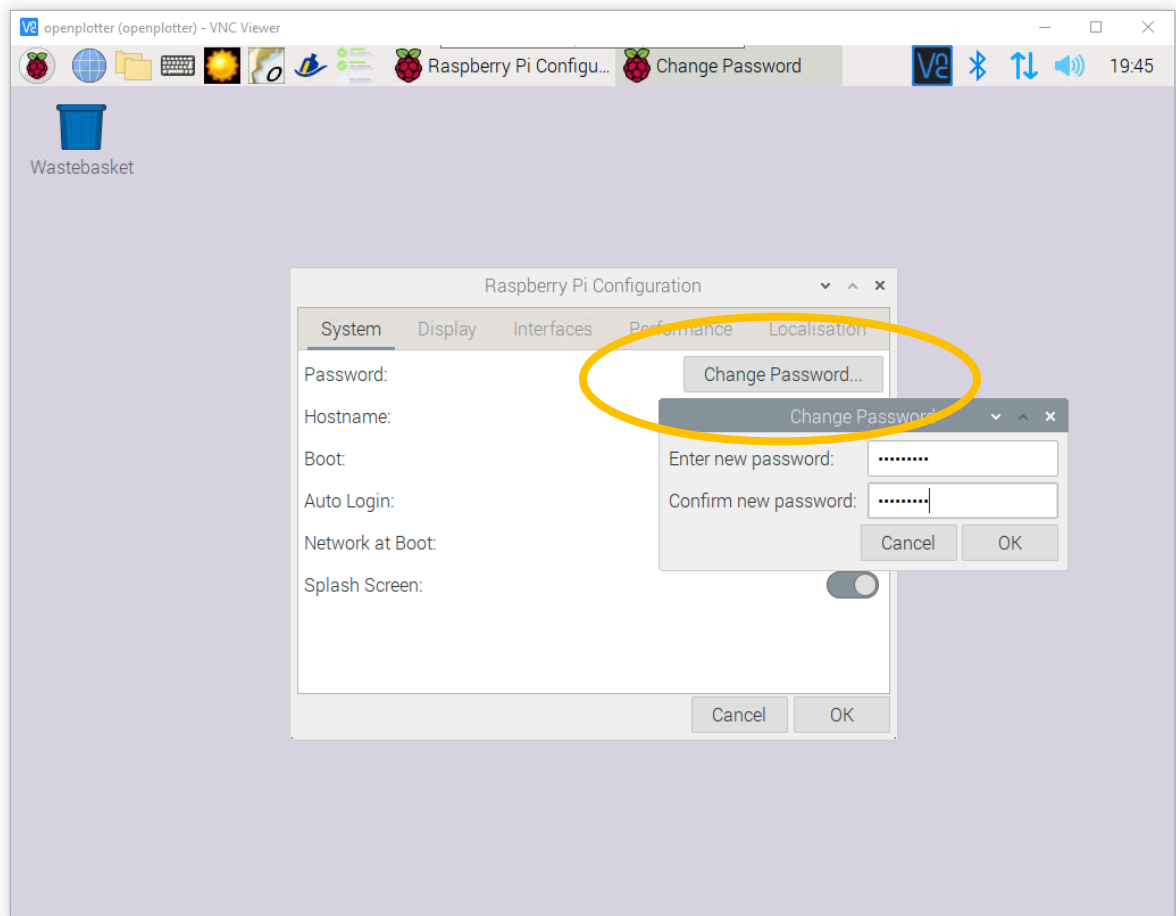




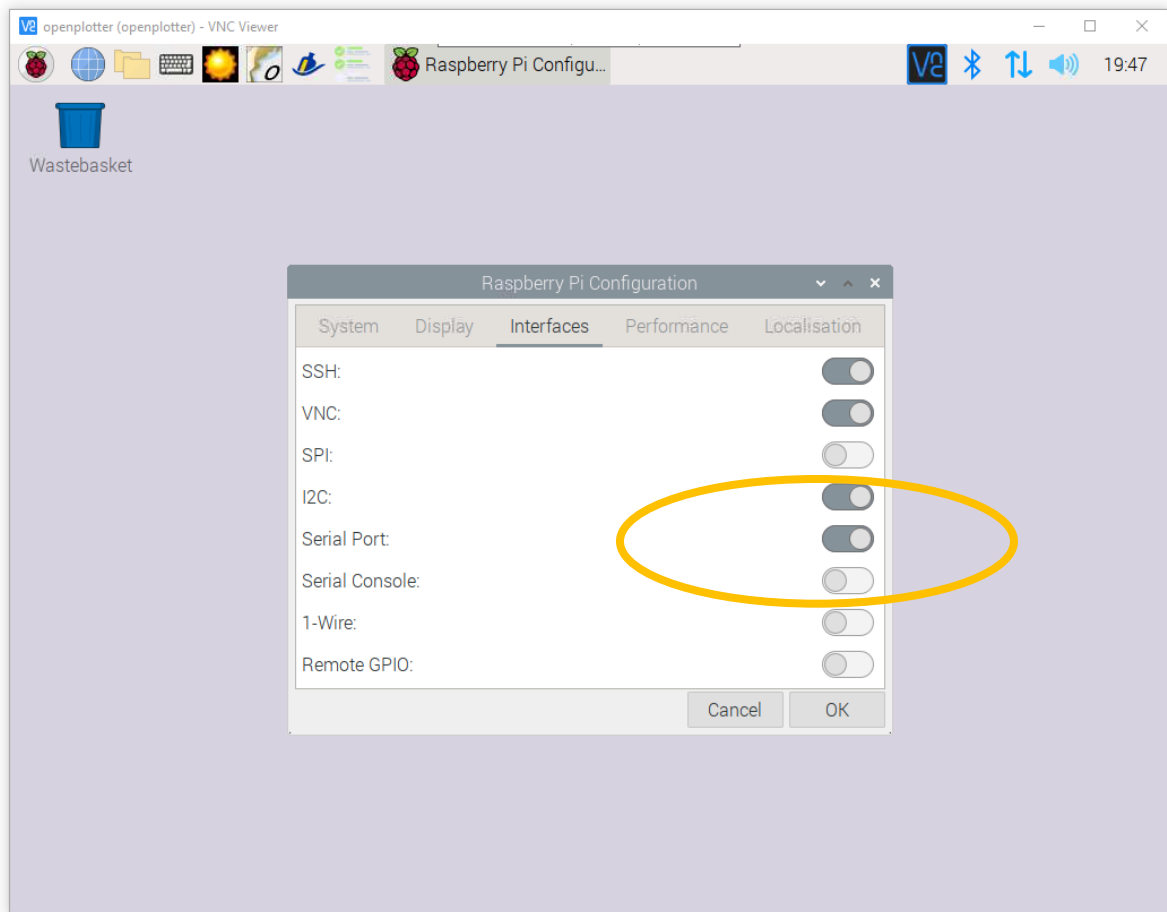
12. Let's first respond to the message you just clicked away: choose Raspberry → Preferences → Raspberry Pi Configuration:



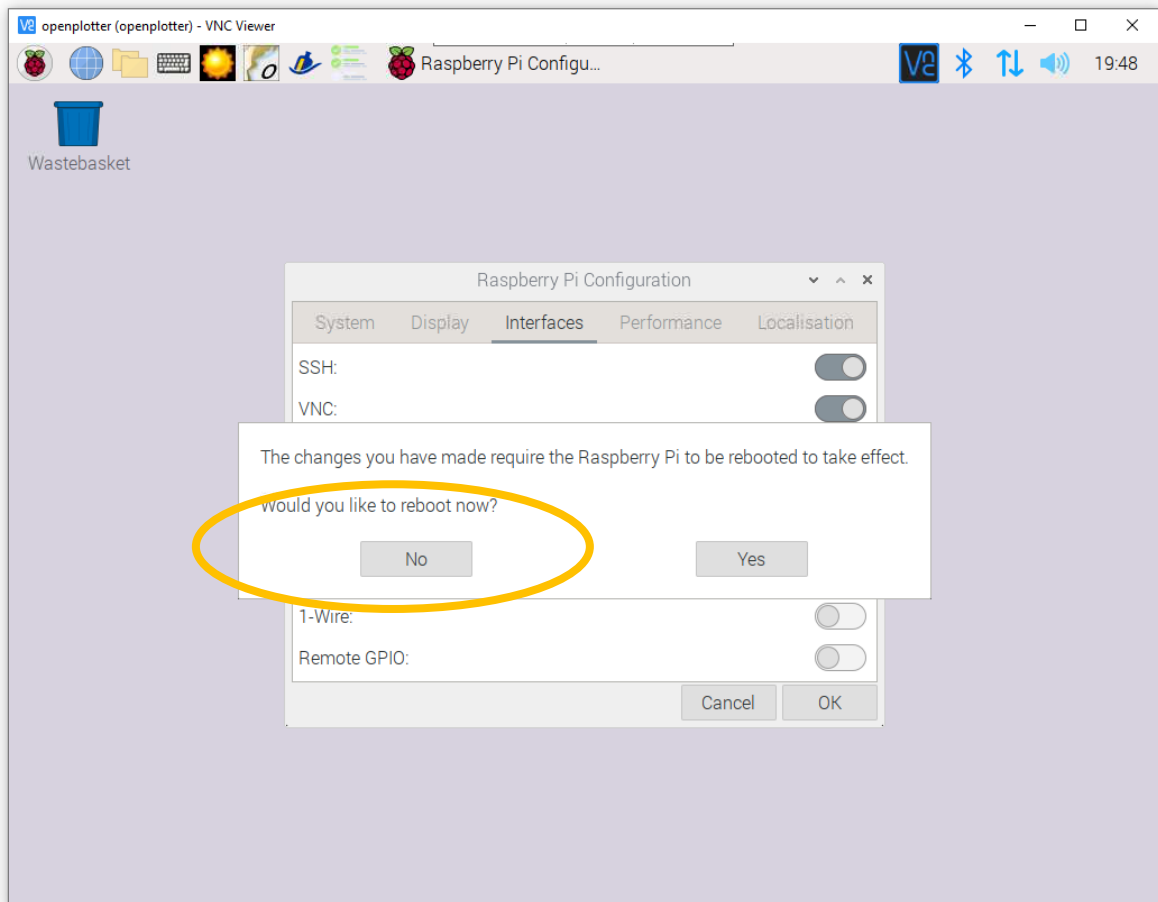
13. Click Change Password and then enter a new password and ok:



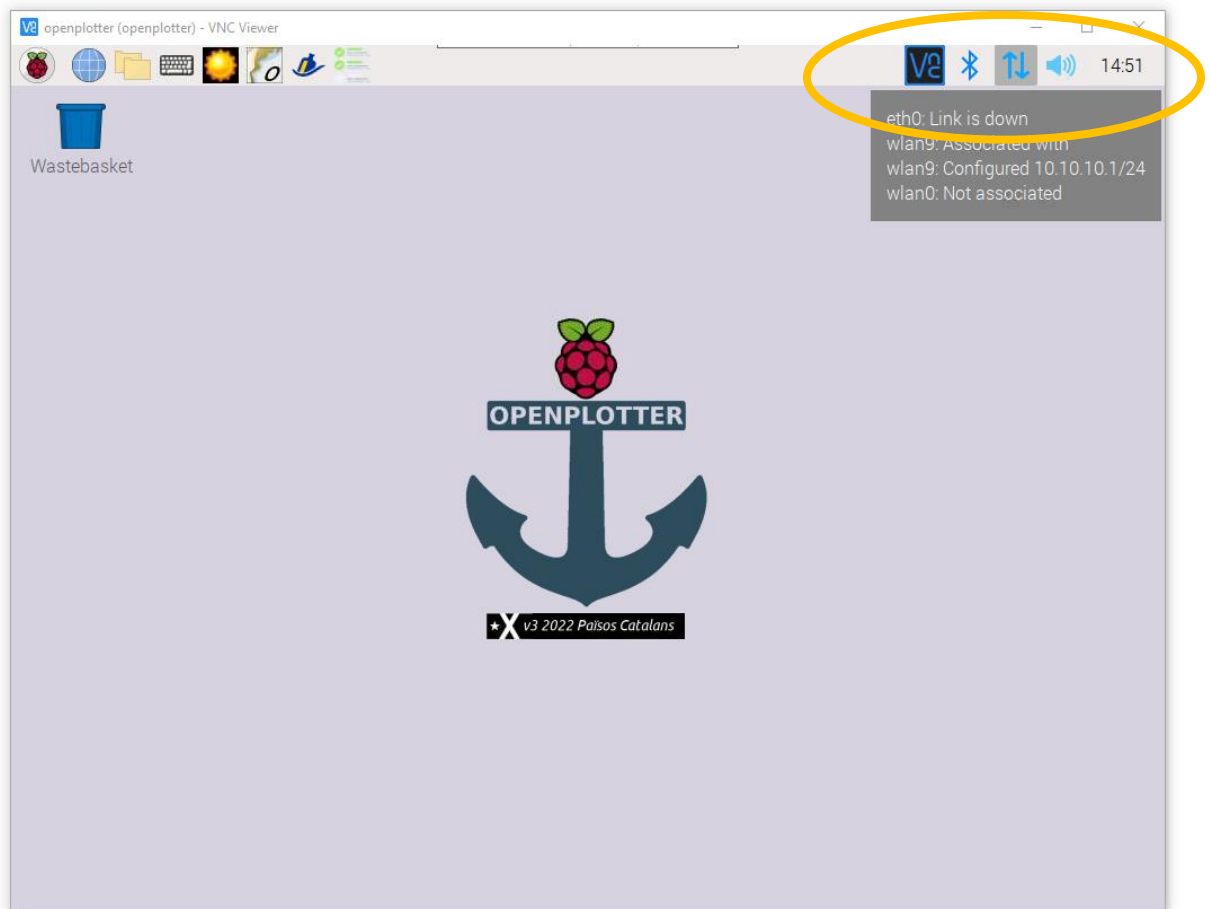
14. Now prepare the raspberry for pypilot operation: click the third tab Interfaces, enable I2C, enable Serial Port and disable Serial Console.



15. Raspberry begs for a reboot, but say no for now:



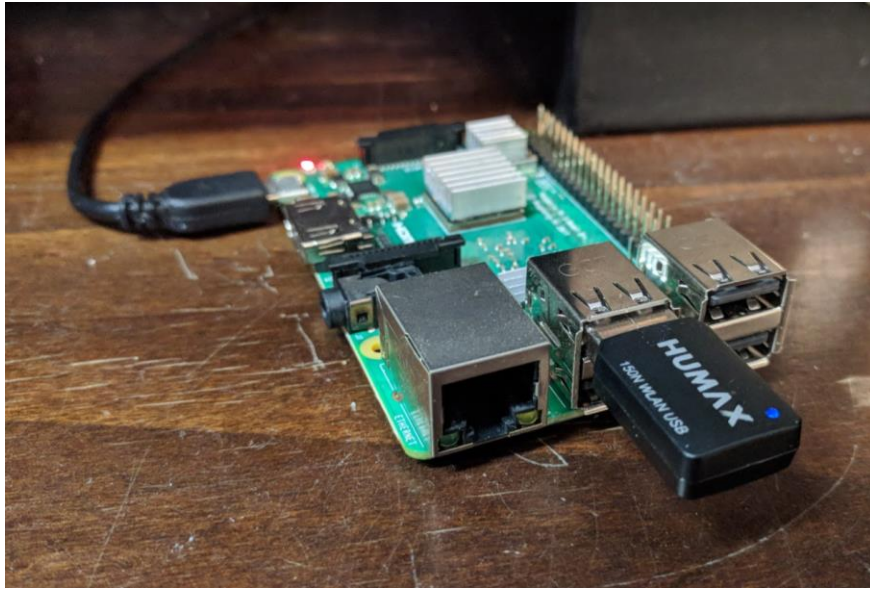
16. Let's first establish internet connection. Hovering over the up and down arrow shows the network interfaces.



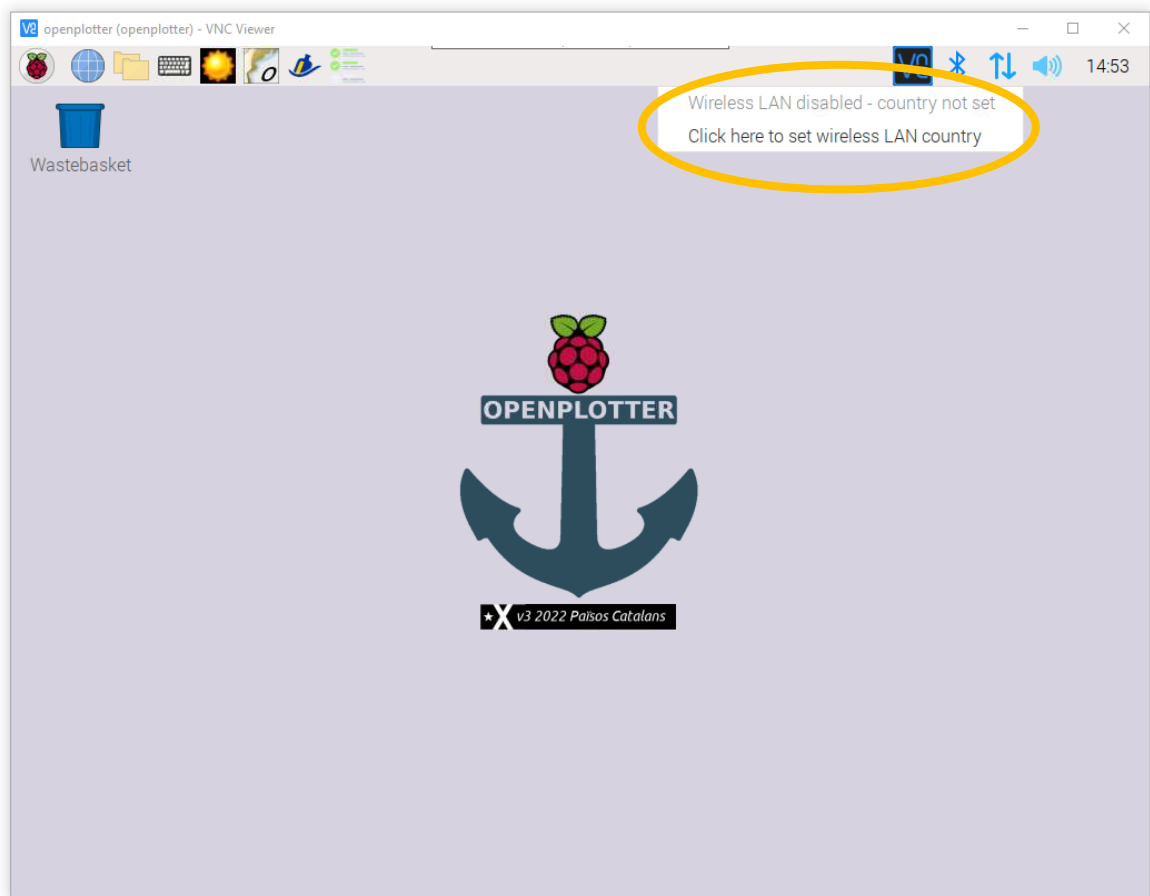
17. If you have stuck in an ethernet cable that comes from your home modem, the eth0 will be set and you are probably set up ok.



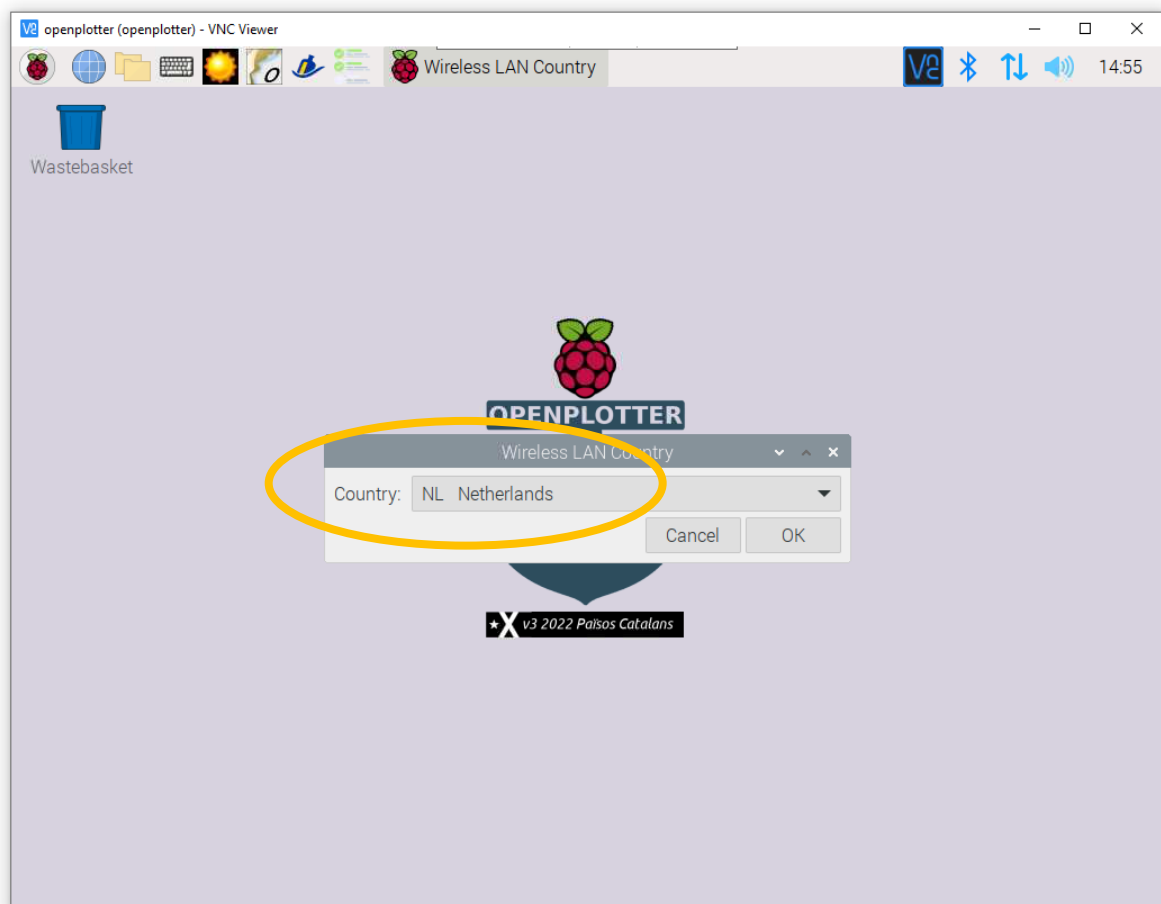
18. If you have stuck a wifi dongle in your raspberry, there is something to be done.



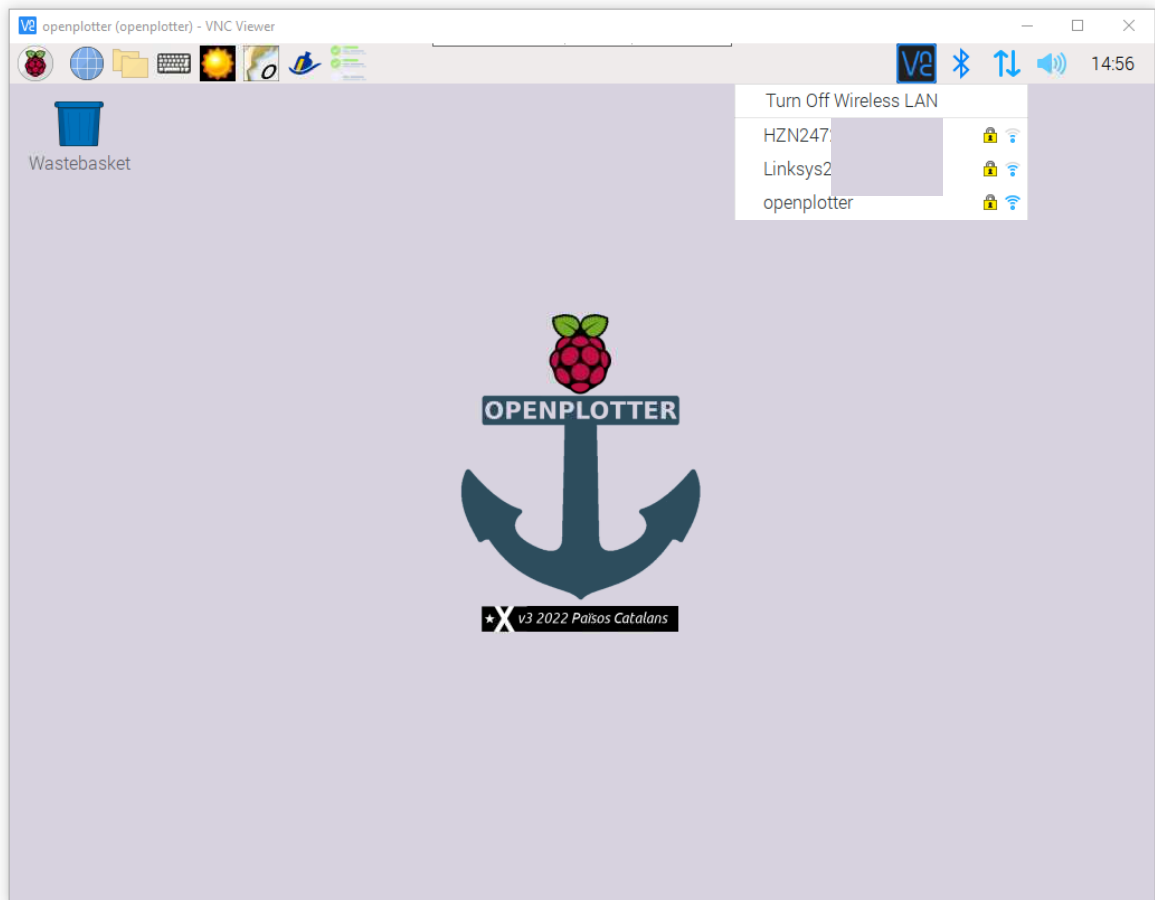
19. First choose your country!?! Long story, don't ask.



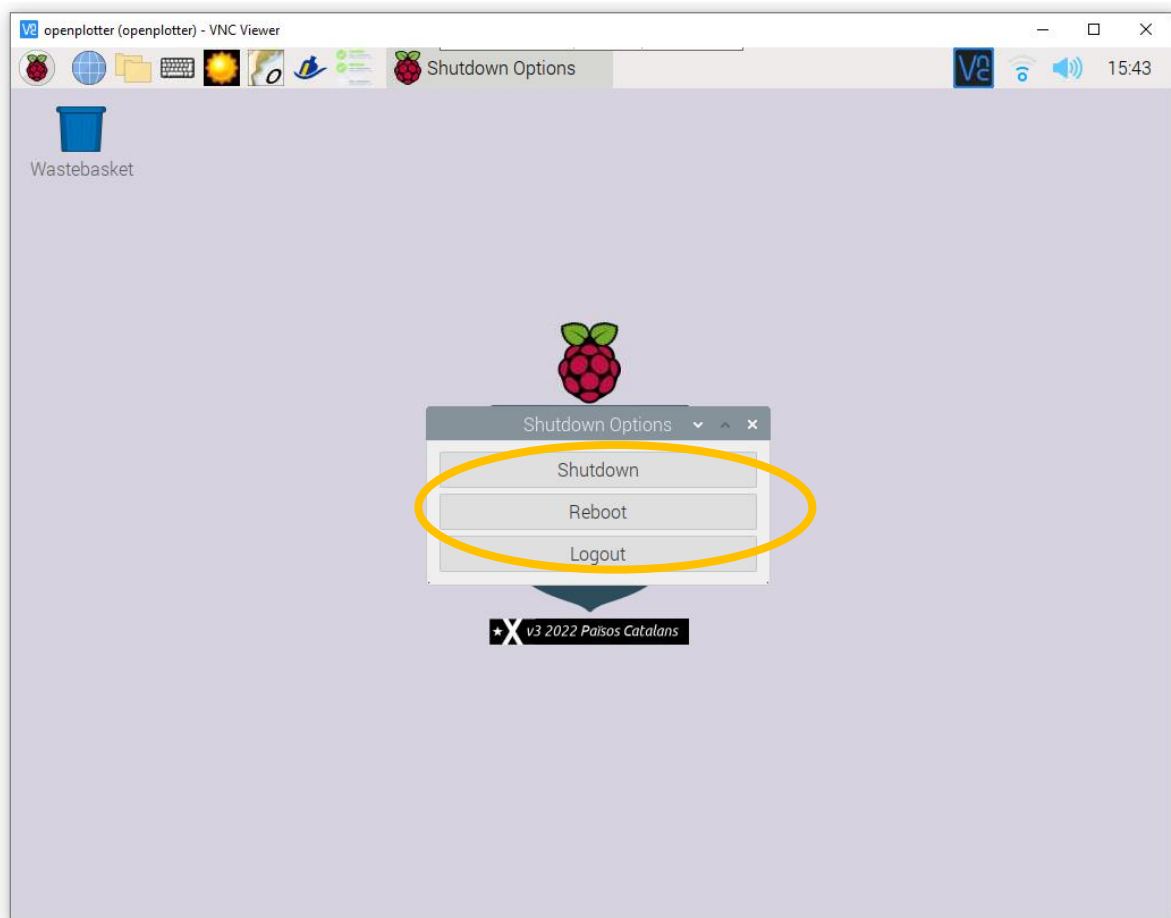
20. Use page down to scroll to the long list, select your country and press ok.



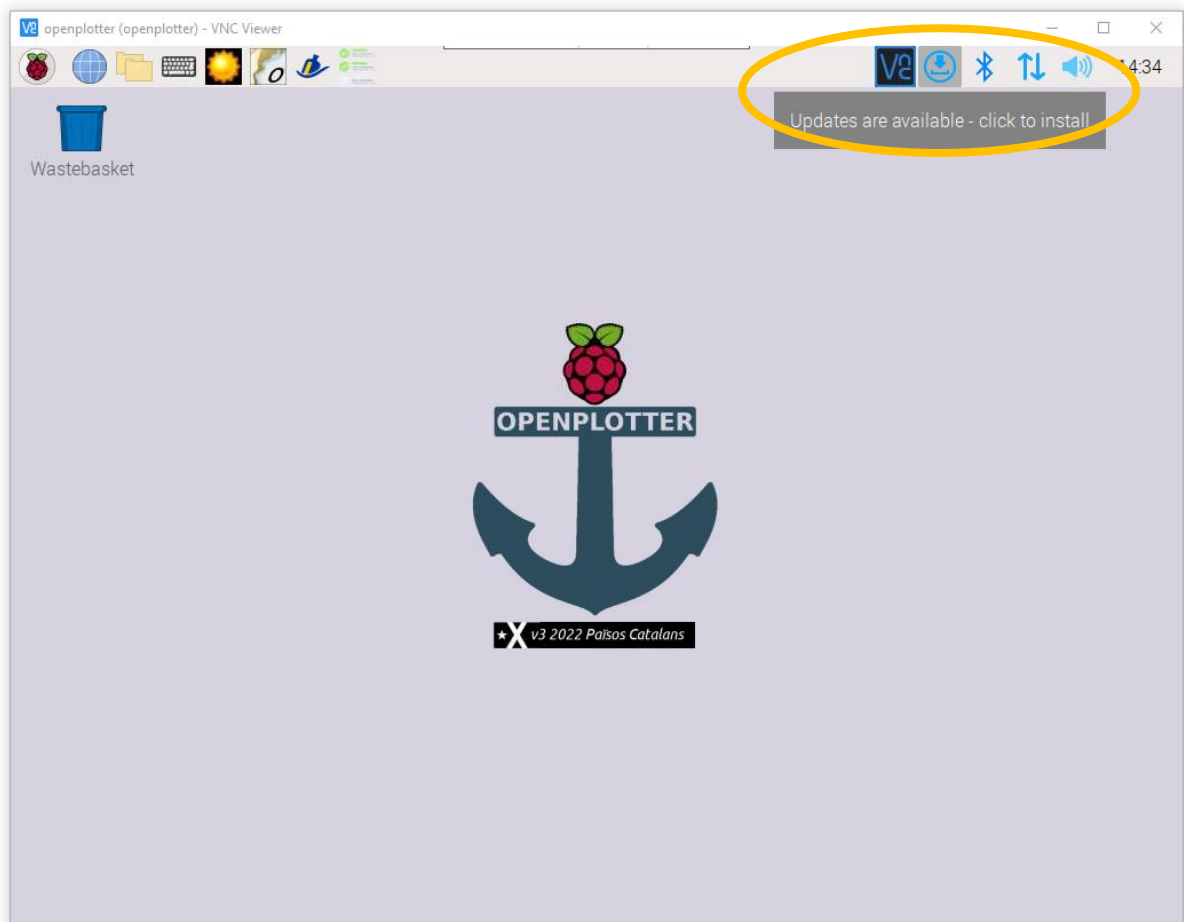
21. Then choose your wifi connection:



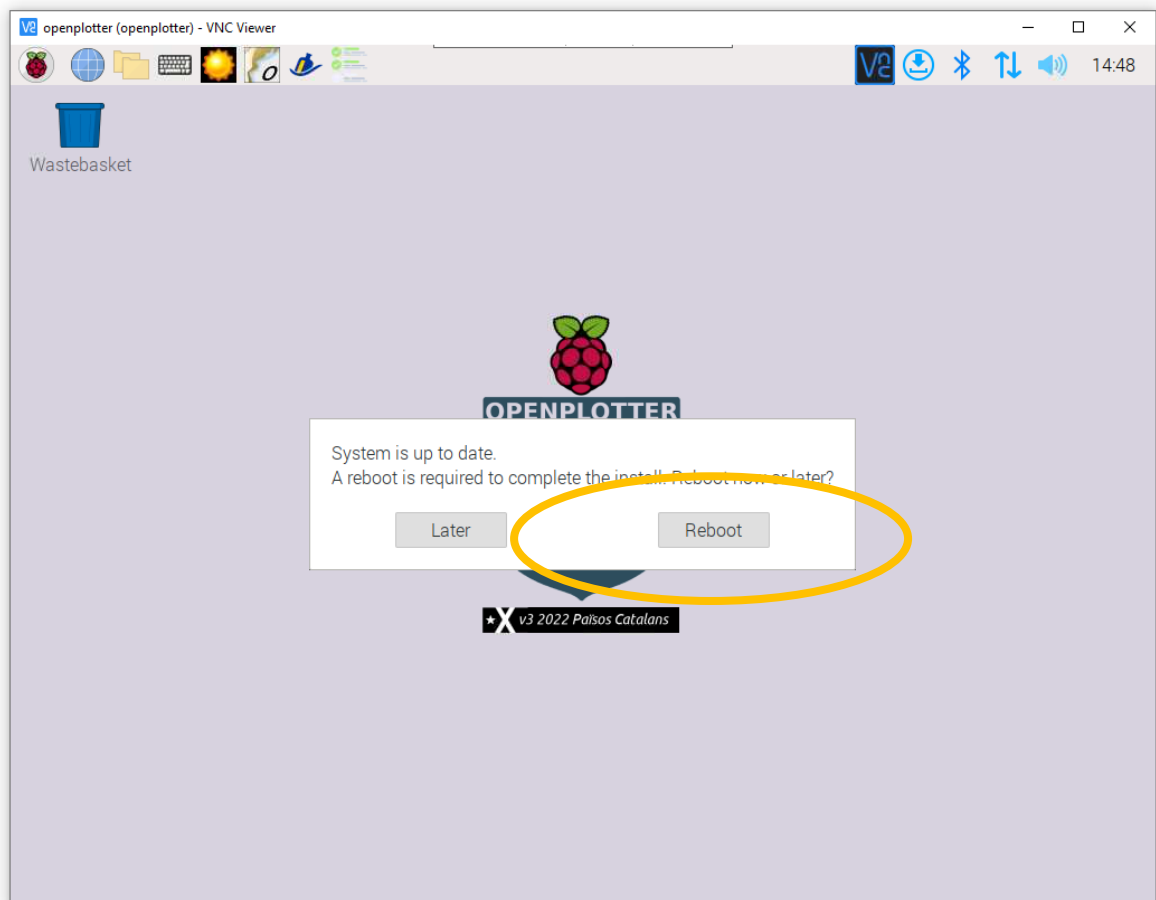
22. Now reboot:



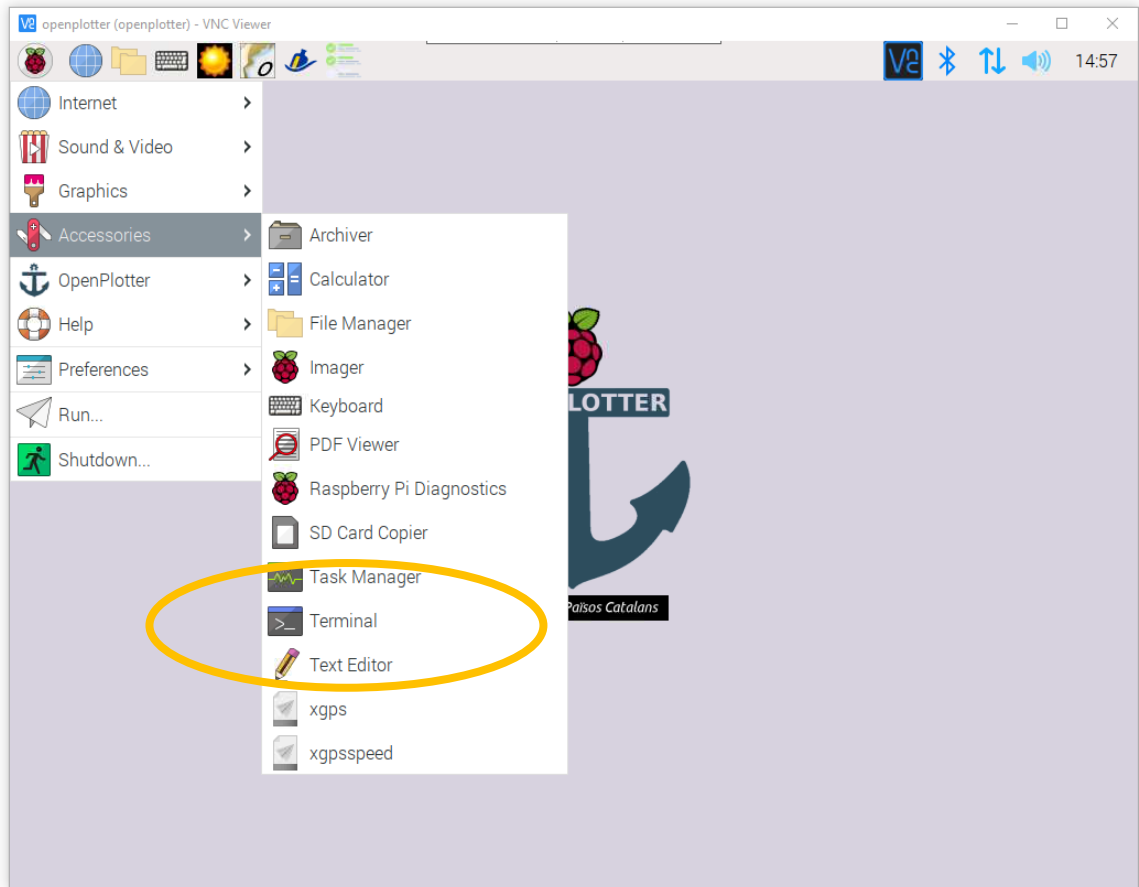
23. When you reconnect to the raspberry, you will see that there are updates available. Install them.



24. And reboot when the system is up to date:

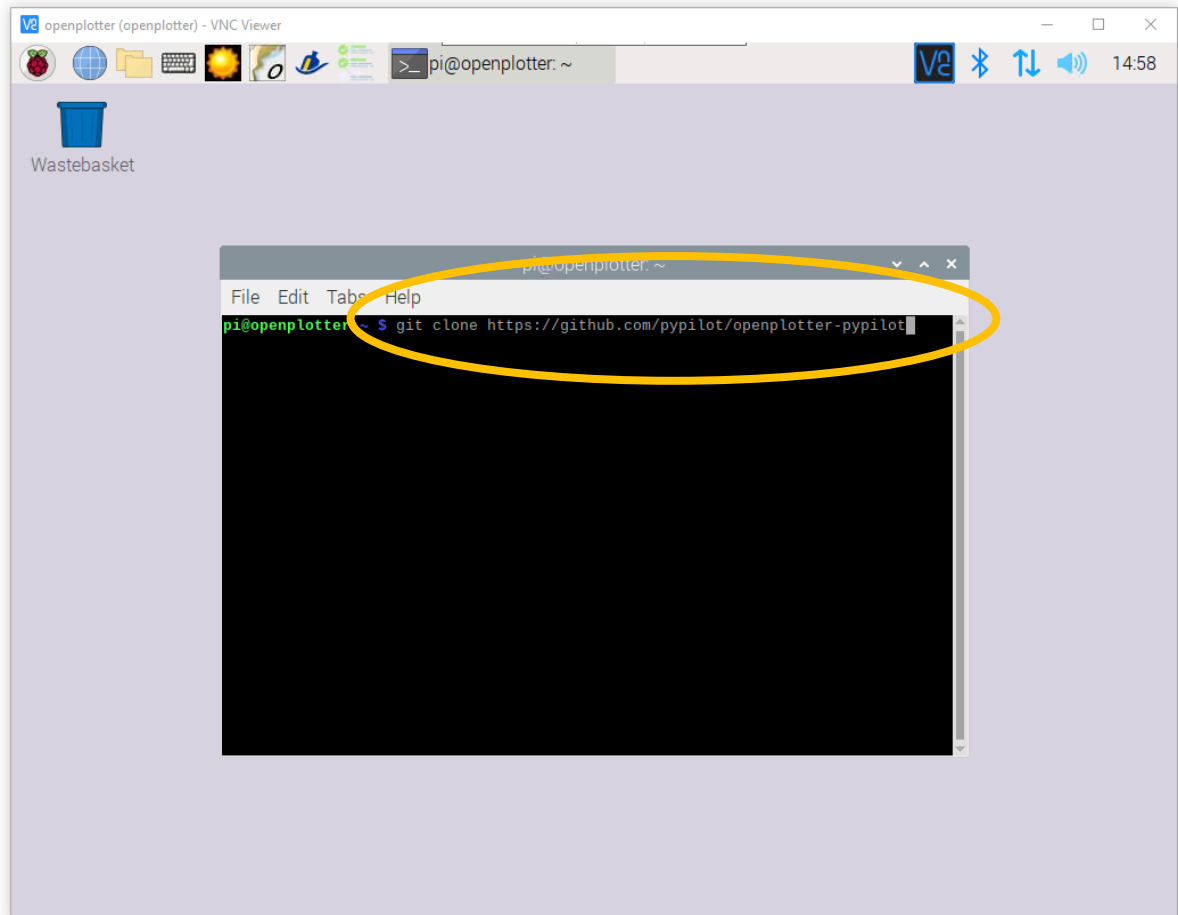


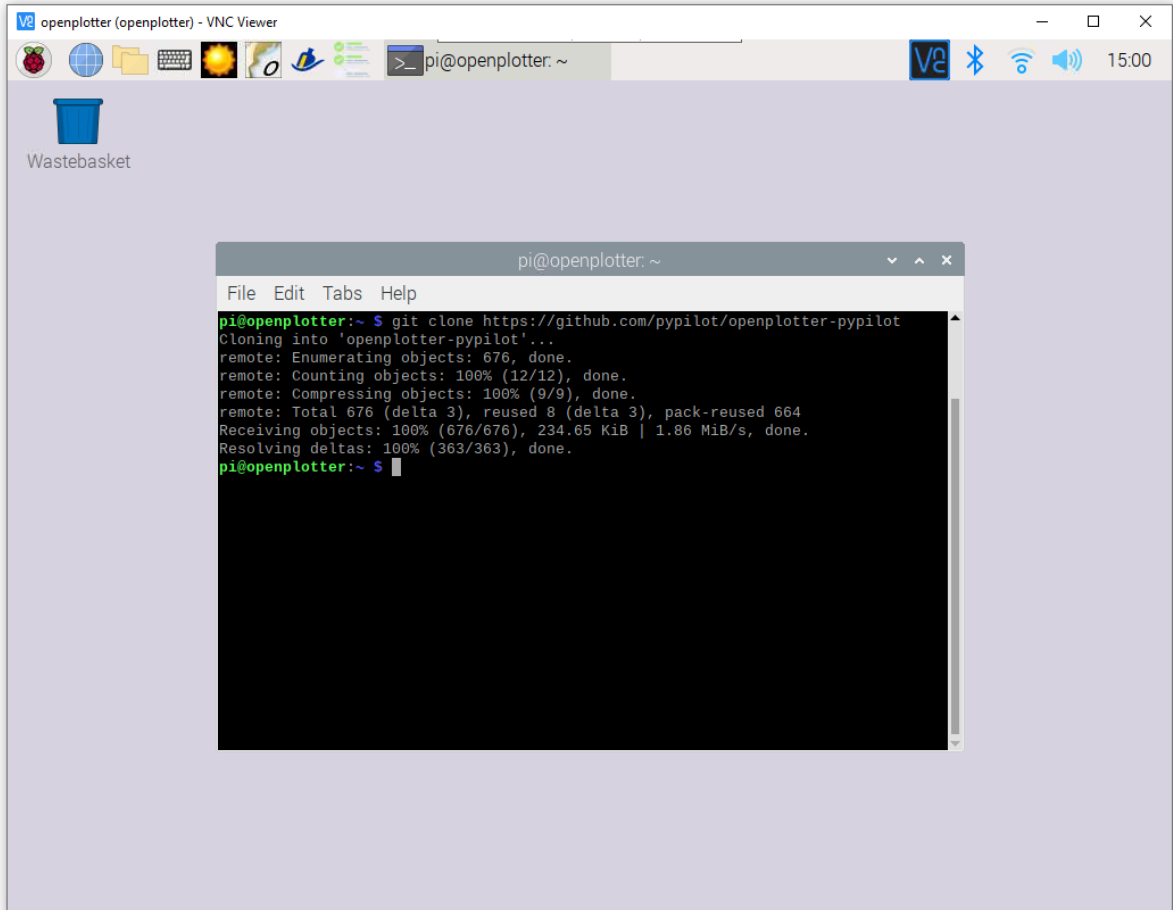
Now we are ready to install openplotter-pypilot. Choose Accessories → Terminal:



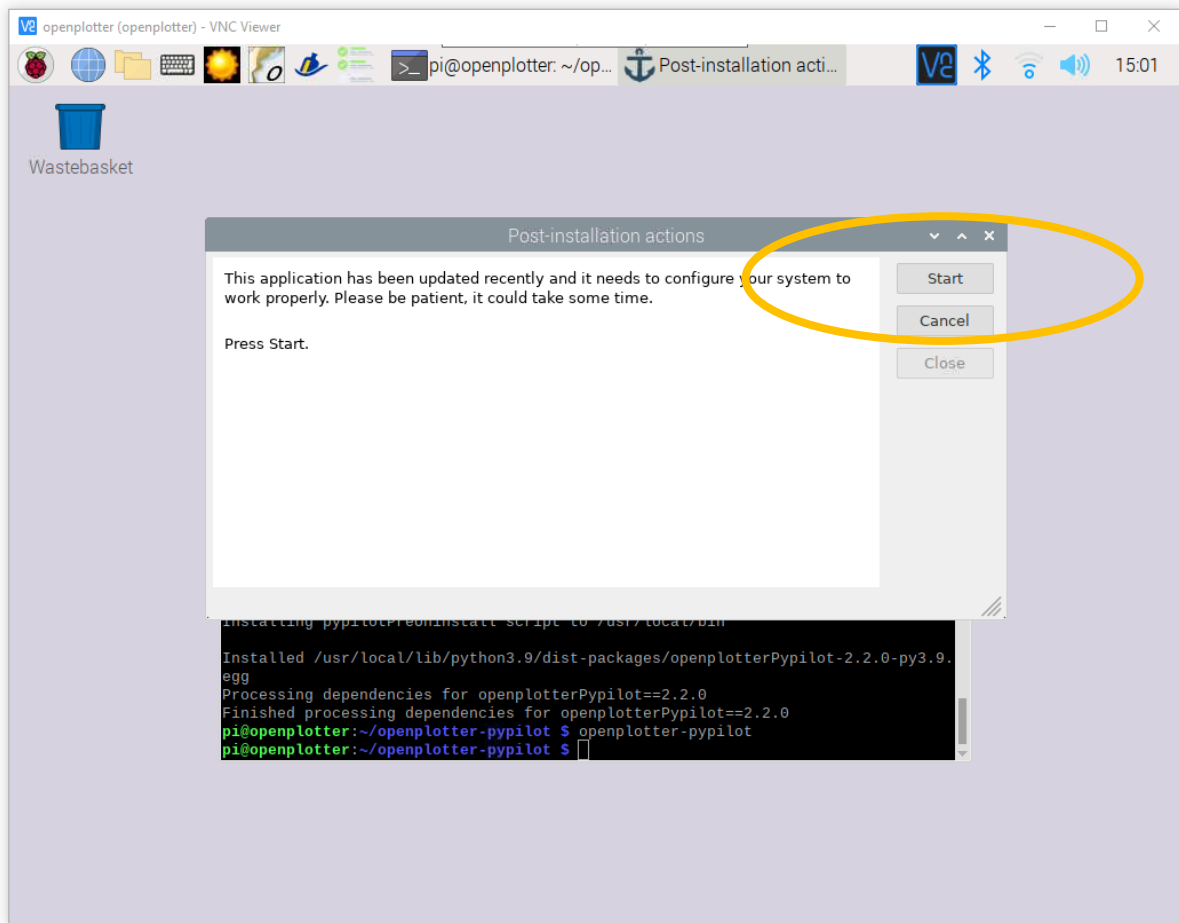
25. Type the 4 (!) commands from the release notes

<https://forum.openmarine.net/showthread.php?tid=4210&pid=23542#pid23542>. If you are on VNC Viewer, you can copy them and use Edit → Paste:

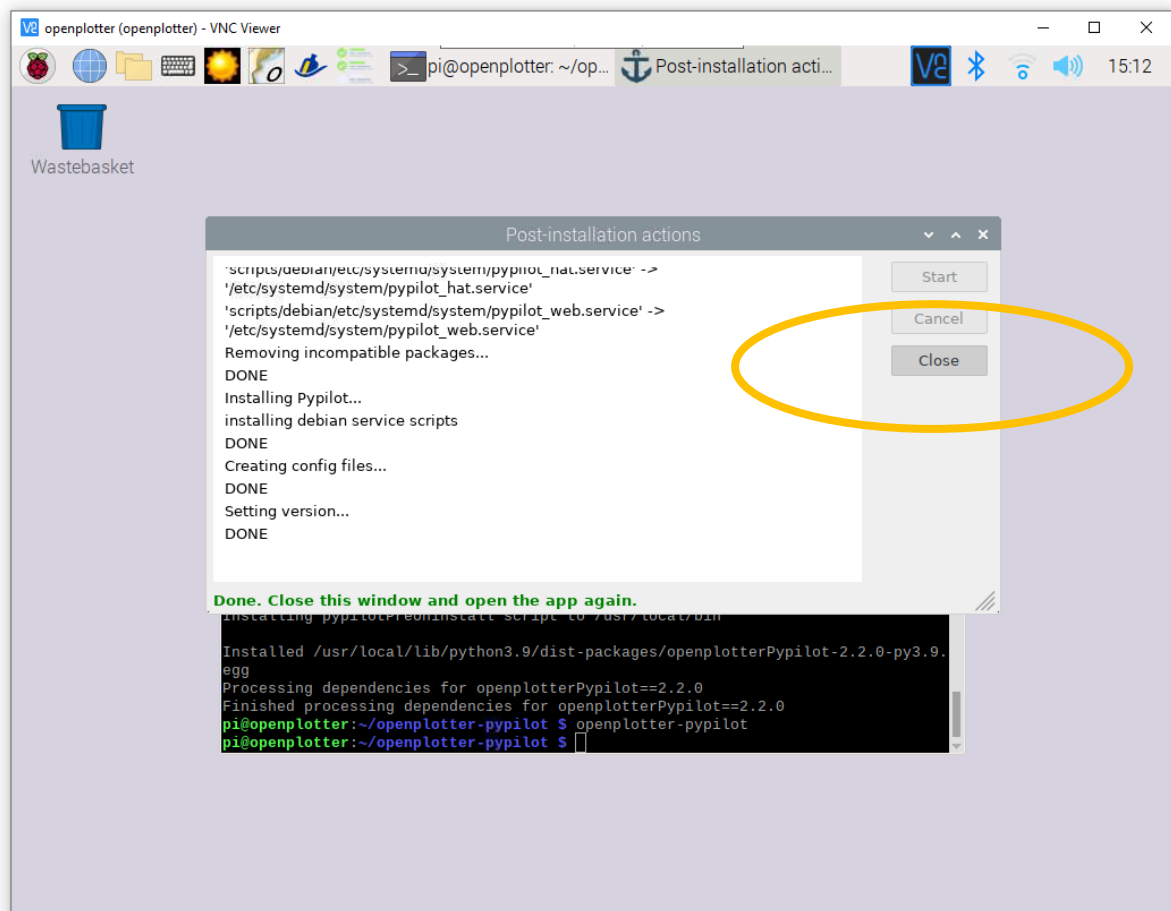




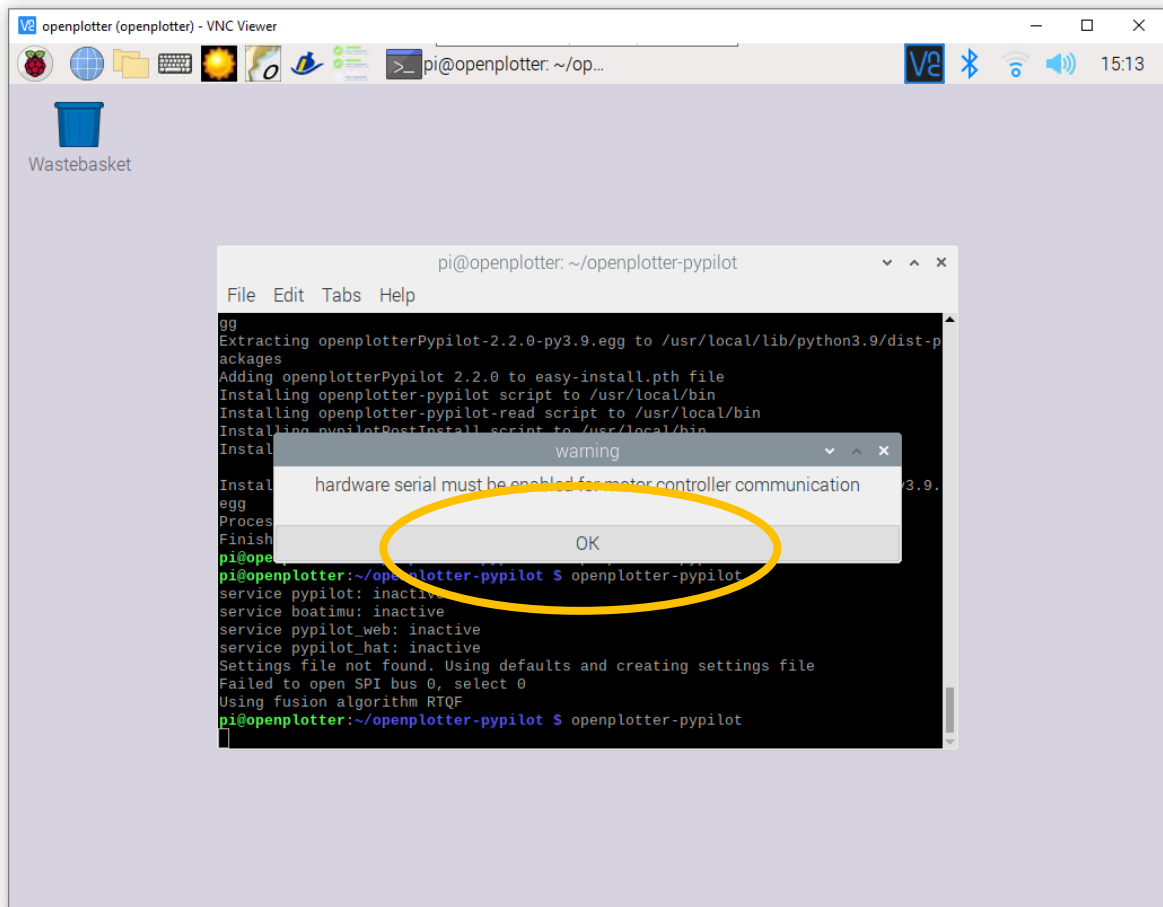
26. These 4 commands go very quick. When you start openplotter-pypilot for the first time, you need to click start to install pypilot itself. This takes quite a while.



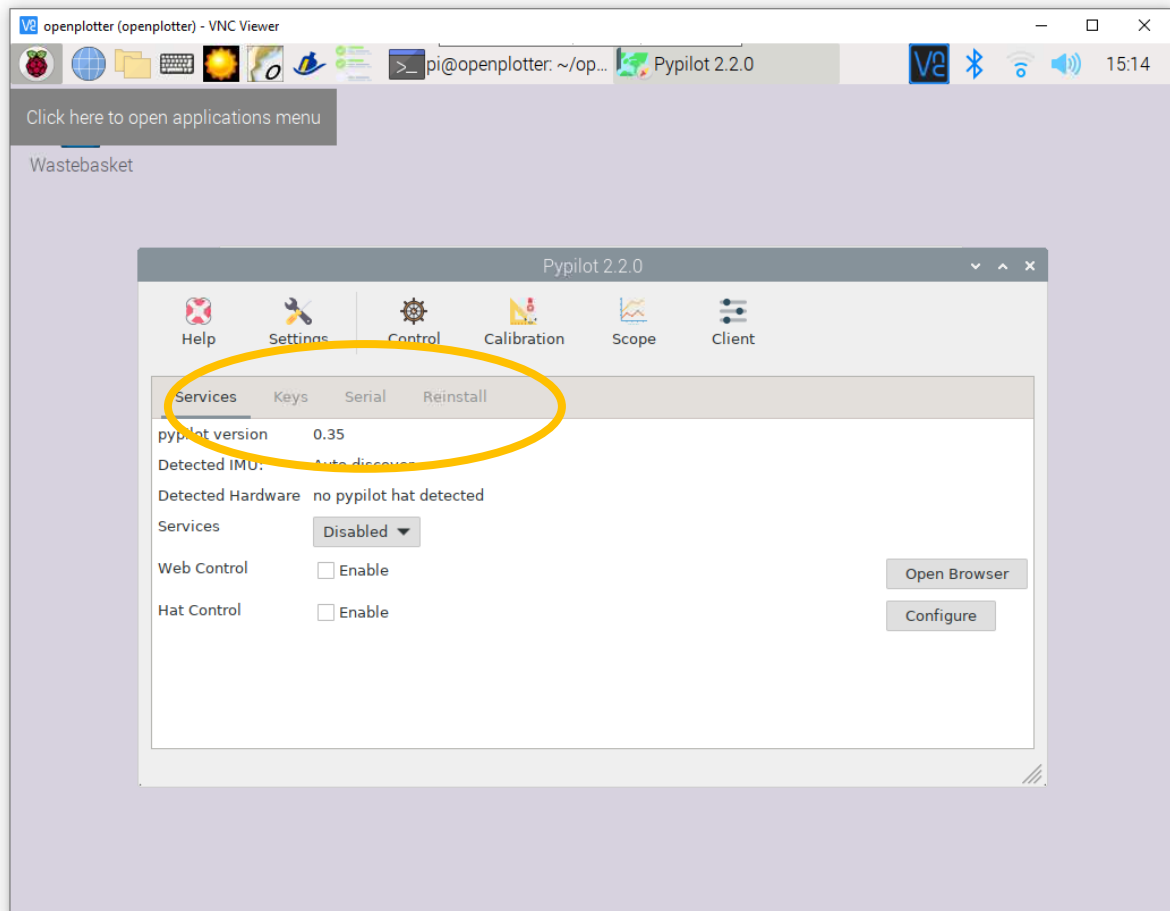
27. After it succeeds, you must close and start again:



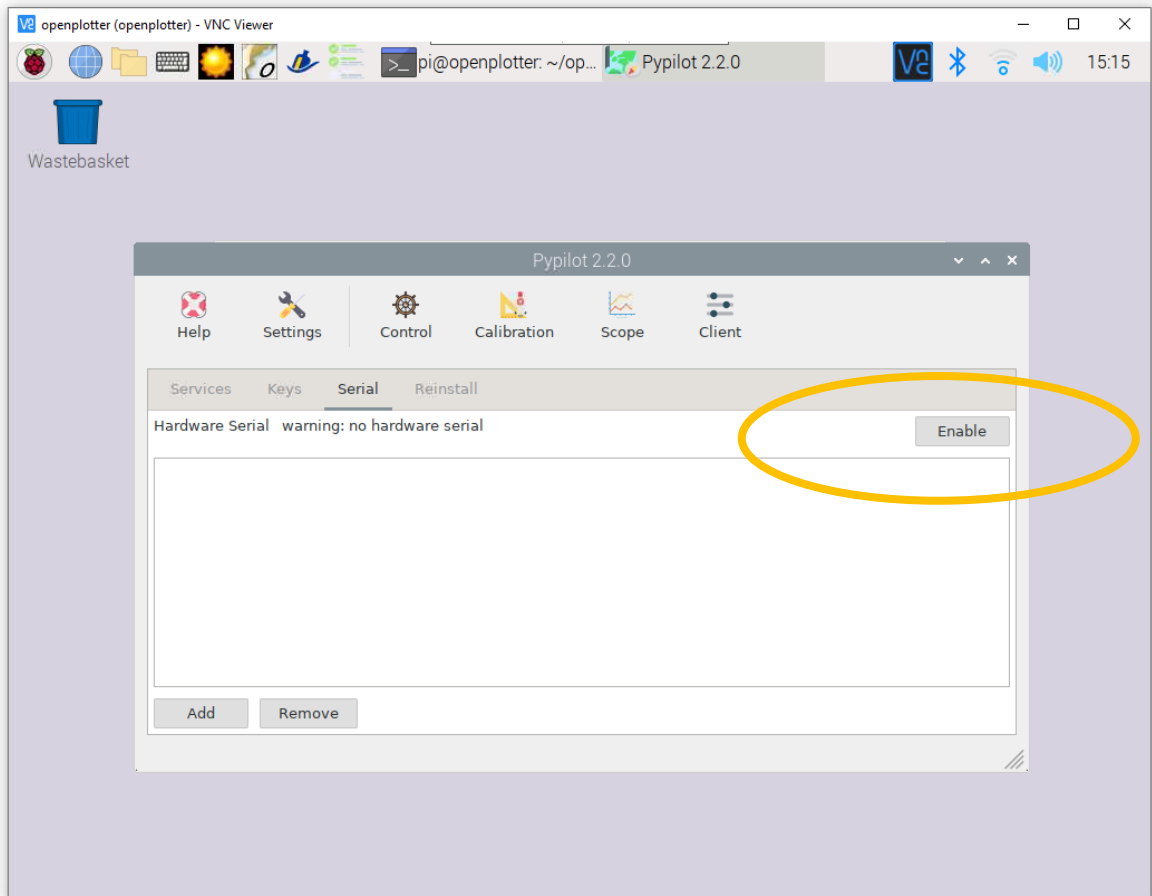
28. When I restarted, I got this message. Which was weird, because I thought I did that in step 14:



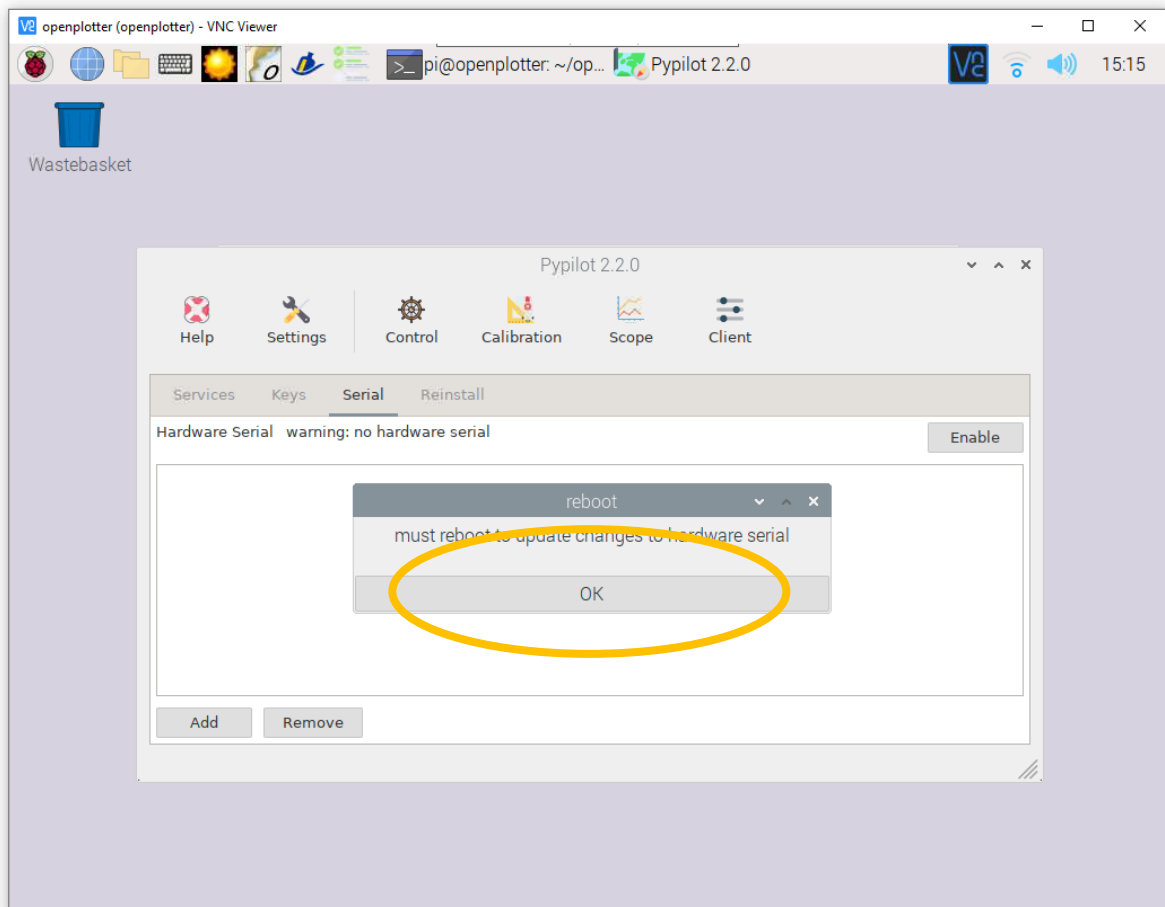
29. Anyway, there appears to be a tab called serial:



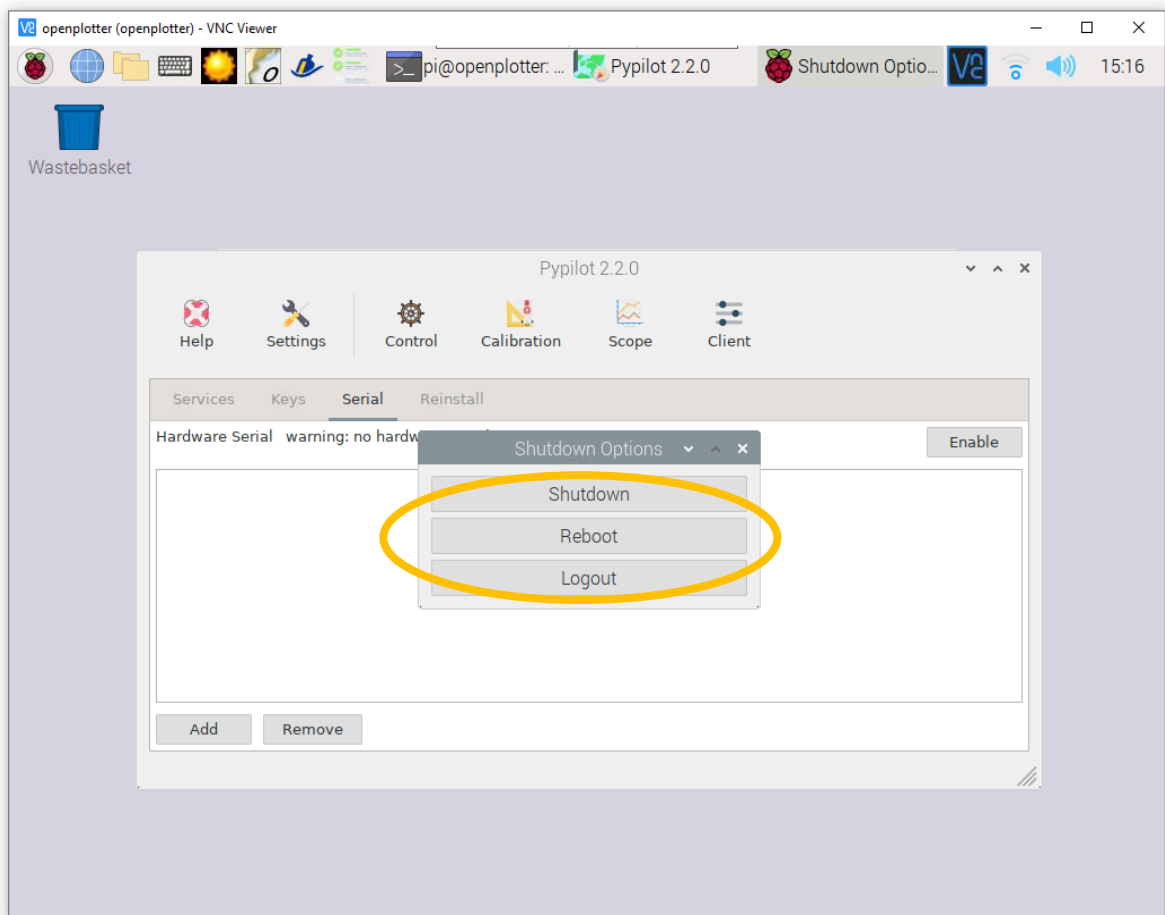
30. And there I can click Enable:



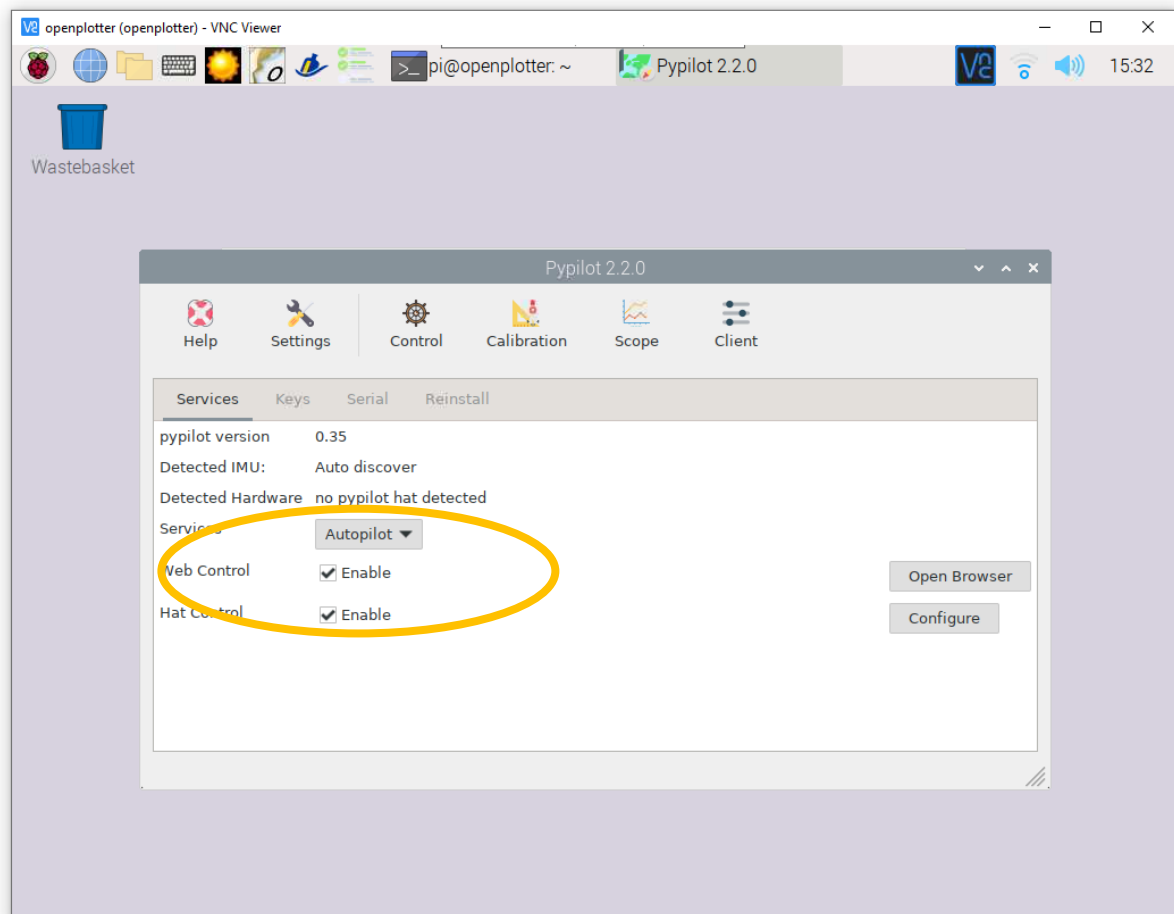
31. Which worked and begged me to do a reboot:



32. Which I had to initiate myself:



33. But after that I could start openplotter-pypilot without any pop-up messages



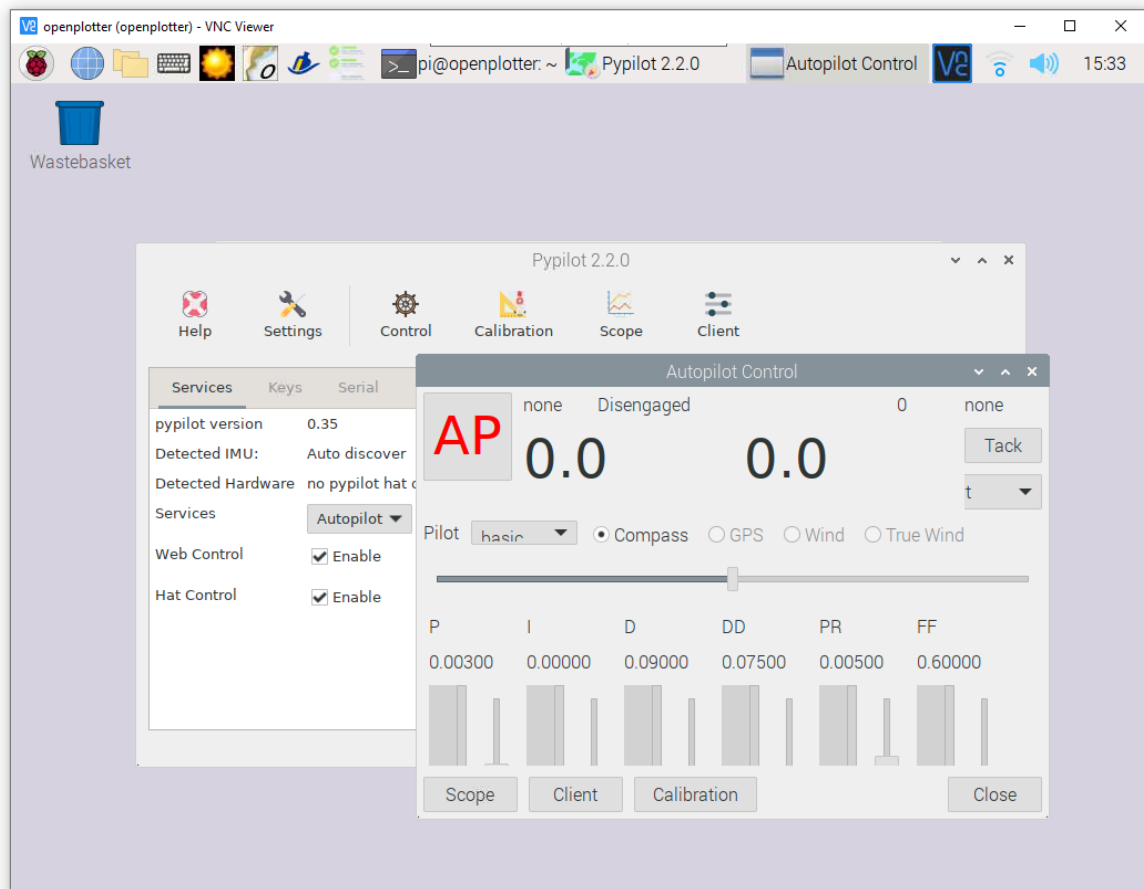
34. Then I switched Services to Autopilot, enabled Web Control and Hat Control. This brought up all services, persistent to a reboot., listening to the right ports and all, so I would call this a success.

openplotter (openplotter) - VNC Viewer

Wastebasket

```
pi@openplotter: ~  
File Edit Tabs Help  
pi@openplotter:~$ sudo systemctl|grep pypilot|grep service  
pypilot.service  
loaded active running pypilot  
pypilot_hat.service  
loaded active running pypilot hat  
pypilot_web.service  
loaded active running pypilot web  
pi@openplotter:~$ sudo netstat -antlp|grep LISTEN|grep python3  
tcp        0      0 0.0.0.0:8080          0.0.0.0:*           LISTEN     136/python3  
tcp        0      0 0.0.0.0:23322         0.0.0.0:*           LISTEN     222/python3  
tcp        0      0 0.0.0.0:20220         0.0.0.0:*           LISTEN     207/python3  
tcp        0      0 0.0.0.0:33333         0.0.0.0:*           LISTEN     763/python3  
pi@openplotter:~$
```


35. For instance, I could select Control to get the control screen.



36. As can be seen, I have no IMU and motor controller connected at the moment; this is because I clipped the gpio pins on this particular raspberry.