

Here we go at debugging the Pi.

Here is the command you gave me for firefox. “sudo apt update && apt install firefox-esr”

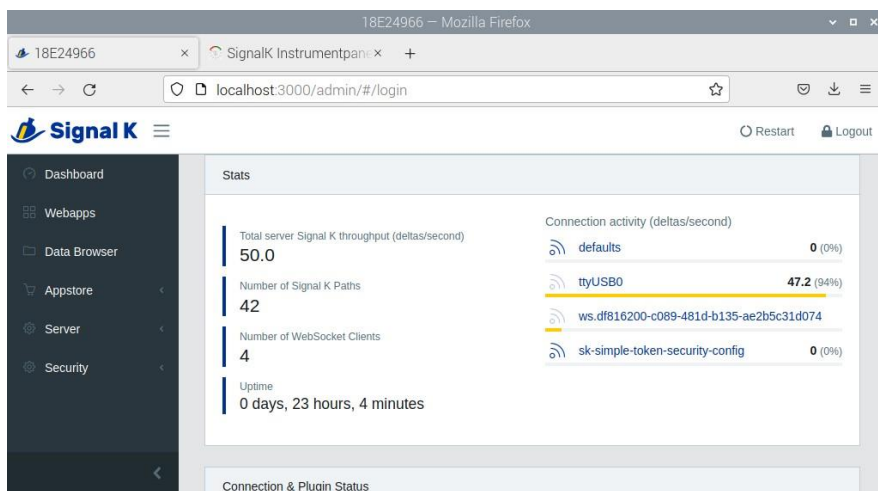
The command should be “sudo apt update && sudo apt install firefox-esr”

The update downloads the latest catalogue from which update installs the latest version. If the update fails then it will not move onto the second of the concatenated commands, the install. It will abort. The update failing means there is no (reliable) internet connection.

Worked at home. The update part on the boat always fails. Times out I think. Even with the phone a hotspot. Sudo apt install firefox works. I’m at a loss why the update should fail unless your repo file is corrupt which is very unlikely. Both commands rely on having an internet connection. That for the moment remains a mystery.

So there must be a speed bandwidth issue there.

Here is where I started Wednesday with connections. TTYusb0 is the boats nema 2k network, ws etc is the i2c connection to the bme280.



Serial 3.x page below.

The screenshot shows the Serial 3.2.0 application interface. At the top, there are tabs for Help, Settings, and UART0 through UART5, along with a Refresh button. Below this is a 'Connections' section with buttons to 'Add to Signal K', 'Add to CAN Bus', 'Add to GPSD', and 'Add to Pyplot'. The main part of the interface is a table listing connected devices:

device /dev/	alias /dev/	data	connection	ID	bauds
ttyUSB0	ttyOP_can	NMEA 2000			
ttyUSB0		NMEA 0183	OpenCPN	2	9600
ttyUSB0		NMEA 2000	Signal K	ttyUSB0	115200

On the right side of the table, there are 'Edit' and 'Remove' buttons for each row.

We have a ttyusb0 at the top, then a ttyusb0 at 9600 baud, which was for the handheld garmin gps when I set up openplotter 3 originally at home to test things out. Had not been able to get rid of it. It's unchecked in openCPN ever since I put the Pi on the boat.

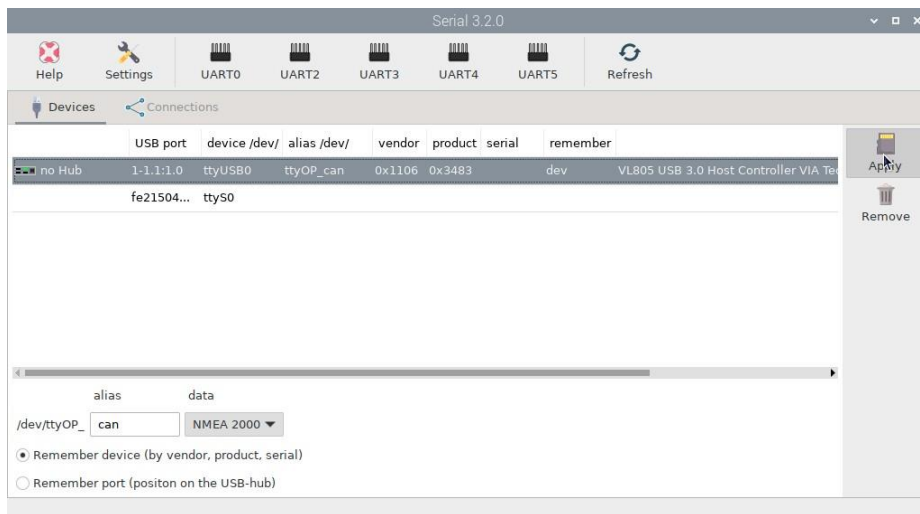
So there must be an active connection to be able to delete one.

The next ttyusb0 shows as signalk.

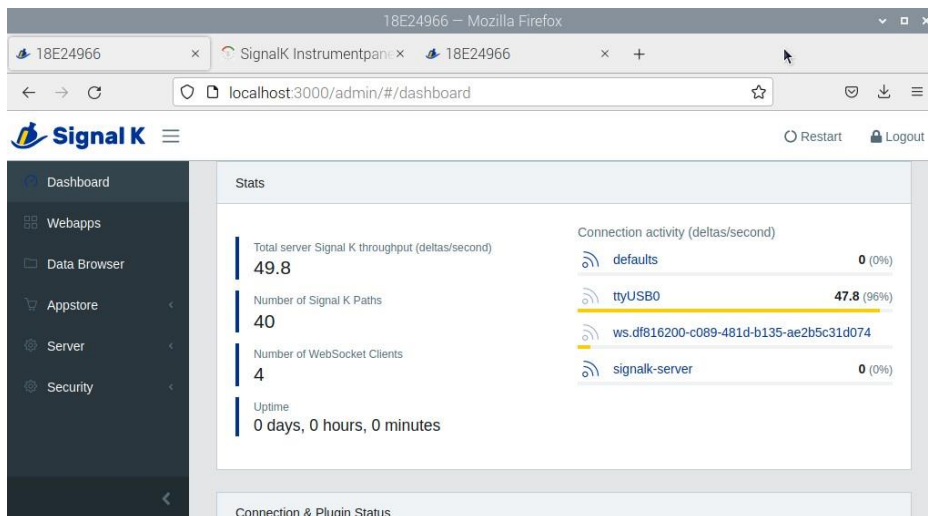
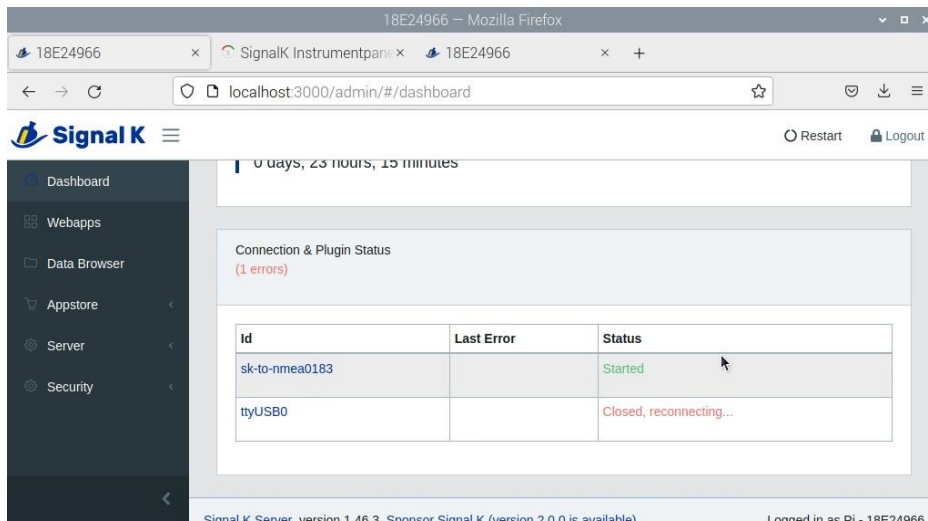
My observations on the Serial panels:

You have three serial connections, used or not used, with the same designator ttyUSB0. The top one has an alias but no connection, the third one has a connection and no alias. Signalk is getting data I can see but I would want to make sure I had only one ttyUSB0 nmea2k connection correctly shown in the Serial app as having both a connection AND an alias. You should only have one.

The middle one for GPS when you say you've unchecked it in OpenCPN what do you mean? Where have you unchecked it? OpenCPN should know nothing about it, it is abstracted by OpenPlotter.



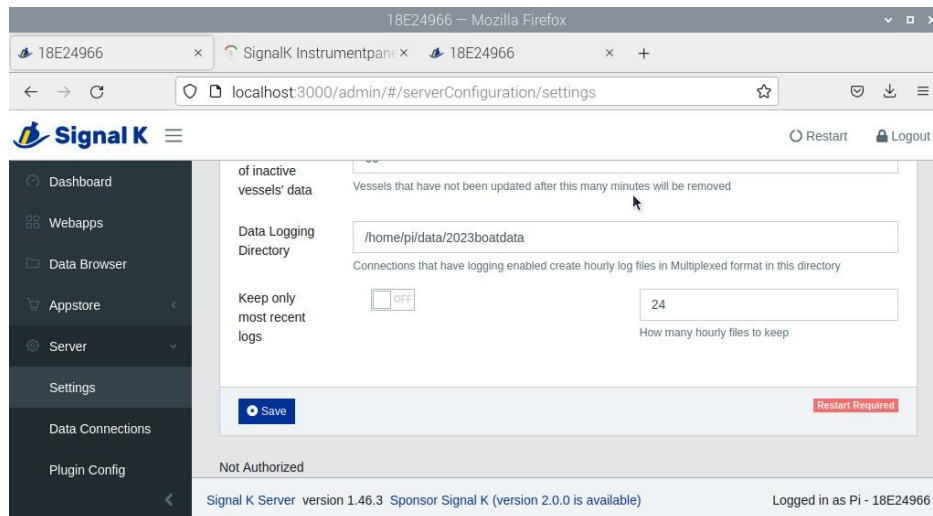
Rebooted, which recreates the error in communication to the nema2k network. Top half then bottom half of screen.



Sometimes it does give an error such as unable to connect. Next page shows the bottom half, showing the data directory and file I set up. Does not get created .

The log files do not get created because you need a final backslash /home/pi/data/2023boatdata/

You will then get files each hour, they are just streams of nmea sentences in the main.



Next steps. I took my handheld gps to the boat. Pulled out the antisense ntg-1 cable, and plugged into the Pi. The GPS started.

Went to the serial connection page and clicked on the ttyusb0 9600 baud connection and edit. Open CPN opened. Closed the box and repeated. Same thing. I went into settings and removed the connection for the garmin. (it was unchecked. I used to have this in opencpn before as a backup. Unchecked of course.). I was then able to erase the connection in settings. Rebooted and got the next boxes. Success.

Ah OK that's good

Went back to serial and this is what I got. 4 screenshots below. Clicked the nohub line and got the next box. Now the alias name is can, which I tried originally on the boat with no luck. Made a new one called actis, which has now disappeared. So I'm back to the original which is now working, for whatever reason.

18E24966 — Mozilla Firefox

18E24966 SignalK Instrumentpane 18E24966

localhost:3000/admin/#/dashboard

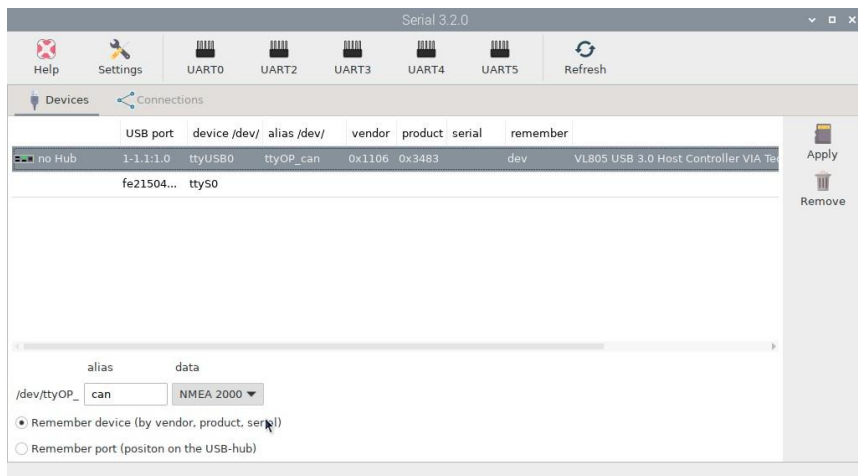
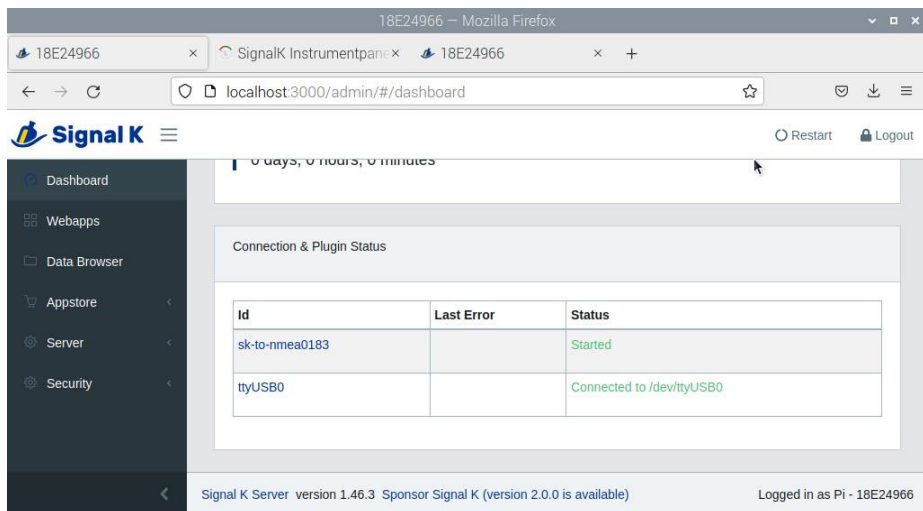
Signal K Restart Logout

0 days, 0 hours, 0 minutes

Connection & Plugin Status

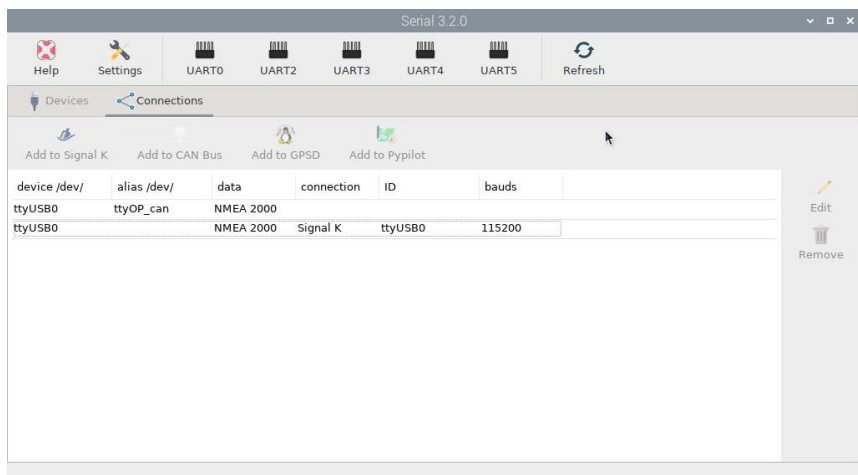
Id	Last Error	Status
sk-to-nmea0183		Started
ttyUSB0		Connected to /dev/ttyUSB0

Signal K Server version 1.46.3 Sponsor Signal K (version 2.0.0 is available) Logged in as Pi - 18E24966



Still have 2 ttyusb0 , not sure if this is normal or one is the missing actis I created to get a connection.

See above you need just one entry here for your actisense with both alias and connection



Next is the system check I ran to see what happens.

Checking touchscreen optimization... | disabled

Checking backlight... | disabled

Checking Power off management... | disabled

Checking Shutdown management... | disabled

Checking OpenPlotter autostart... | enabled

Checking rescue mode... | disabled

Checking debugging mode... | disabled

Checking system log file size... | System log file size: 4.11 MB

Checking OpenPlotter packages source... | added

Checking SDR processes... | SDR AIS is not running

Checking Notifications... | running

↳The access request must be aproved with read/write permission in Signal K administrator.

Checking GPIO... | pigpiod running | Seataalk1 disabled | 1W enabled | pulses disabled | digital disabled
| openplotter-gpio-read not running

↳The access request must be aproved with read/write permission in Signal K administrator.

Checking I2C sensors... | openplotter-i2c-read running | I2C enabled | Access to Signal K server validated

Checking Network... | NTP server running | correct access point password

Checking serial connections alias...

↳There are serial connections with no alias assigned:

Signal K -> connection ID: ttyUSB0 | device: /dev/ttyUSB0

Checking Dashboards... | Grafana running | Influxdb running | Telegraf running | SailGauge enabled

Checking OpenCPN... | running | | autostart disabled | FP fullscreen autostart enabled

↳OpenCPN shortcut is broken, click "Install" in OpenCPN Installer app to rebuild it.

The default OpenCPN connection is missing and is not getting data from Signal K. Please create this connection in OpenCPN: (note, the GPS data is getting to open cpn even with this message)

Network

Protocol: Signal K

Address: localhost

DataPort: 3000

Automatic server discovery: not

Checking Signal K server... | running

Checking serial connections conflicts... | no conflicts

Checking network connections conflicts... | no conflicts

Checking GPIO conflicts... | no conflicts

What connections do you have set up in OpenCPN? A screenshot of that page would be extremely handy

I am pondering how OpenCPN is receiving GPS data but it may be explained when we look at your connections page in OpenCPN

CHECK SYSTEM FINISHED

As you will see there is a message about opencpn. Opencpn is getting at least the gps data from the network. Shows the fix and is connected. I have tried the install routine, multiple times and it appears non functional. Opencpn does start full screen, very slowly, couple of minutes required to get the toolbar at the top to show. I'm using an official raspberry pi keyboard and use the raspberry key to bring up the pi menu. After a while I can get into the menus and toggle screen to get a smaller screen that doesn't cover everything.

I'm not sure if there is a bug somewhere in the opencpn, signalk serial routines; or it's just the way I set things up at home. And mistakes learning openplotter 3.x.

I usually use a separate chip for each year. So:

1. Given the poor internet connections at the marina and via cell phone hotspot initial installation of openplotter needs to be done at home. **Agreed**
2. Must recall to not try the garmin at home and set up the NTG-1 connections to the Pi on the boat. **Well you should be able to, just disconnect the Garmin when you are done at home and delete the serial device and connection. It should work fine**

Best of luck