Jetson Nano Firstboot Preparations

In this guide you will learn to test the capabilities of the Jetson nano as well as ways to control it remotely

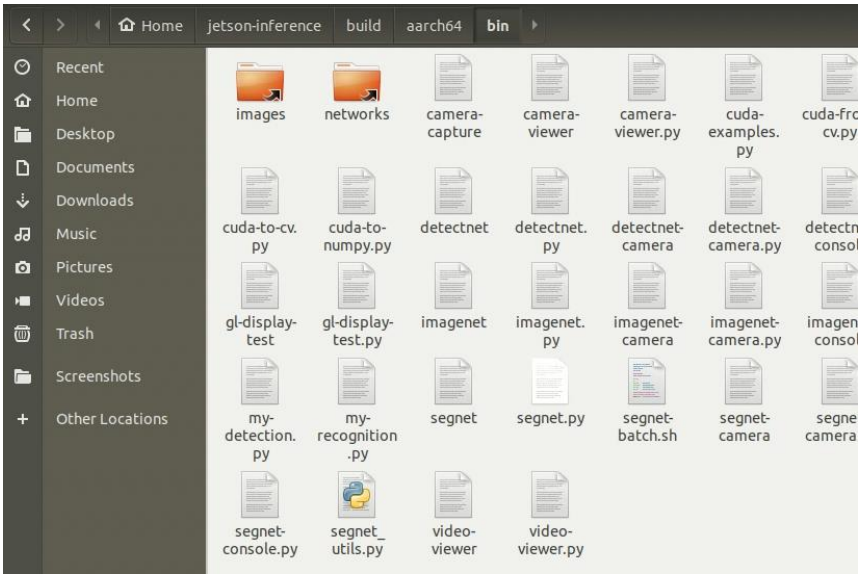
1. Launching the Object Detection demo

After powering up the vehicle and connecting a HDMI cable to a monitor, you will see an interface being shown on the monitor, that is the desktop.

Step 1.1

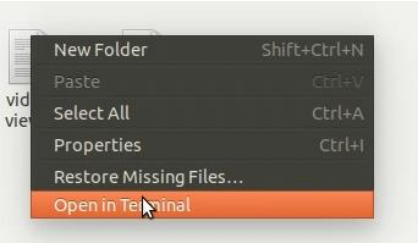
Open file manager by clicking on the folder icon.

Navigate to jetson-inference/build/aarch64/bin



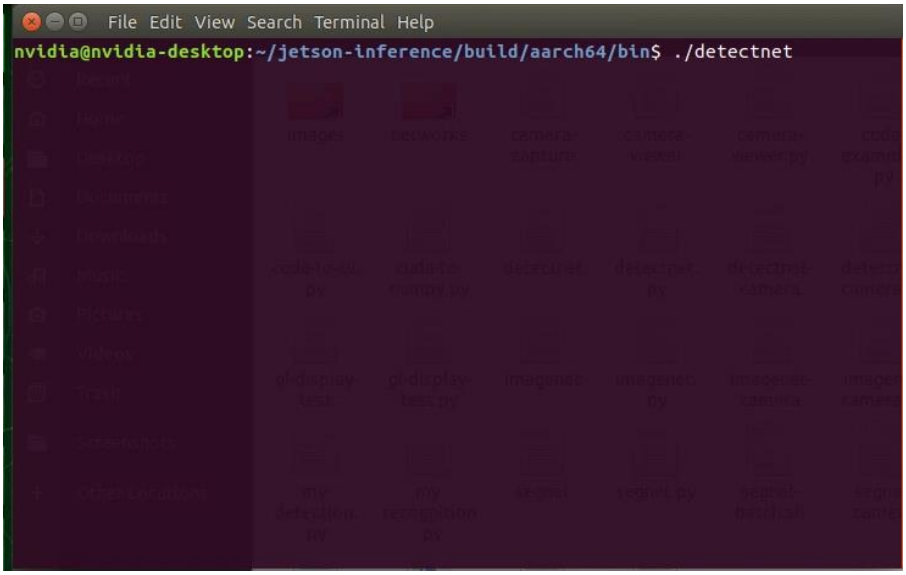
Step 1.2

Right click on the nearby empty space and select open terminal here

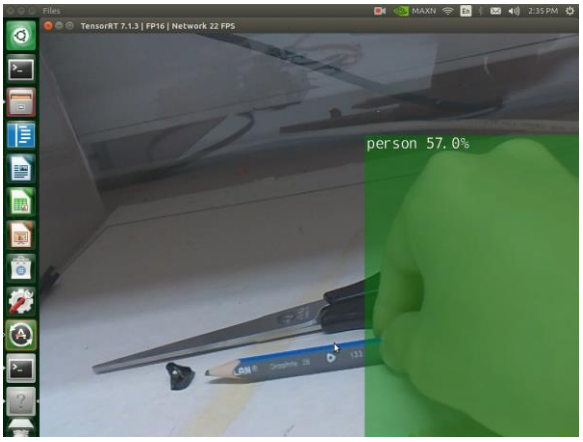


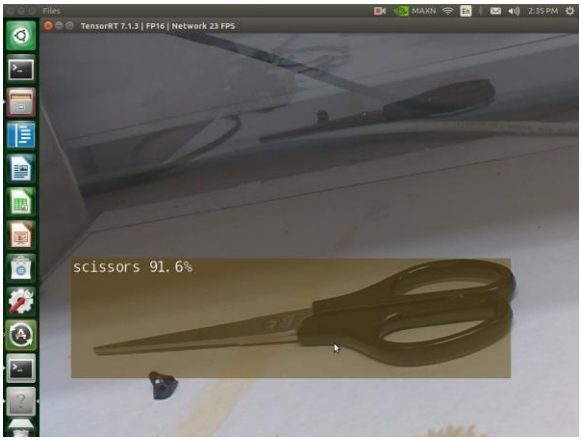
On the terminal type "./detectnet" without the double quotes

Then hit Enter



An interface will open up and show the camera view, try putting daily objects (scissors, cups) in front of the camera and see if the program can detect it.





What you are seeing is a basic form of the network (able to detect about a thousand objects), later this guide will teach you how to train it to detect new things.

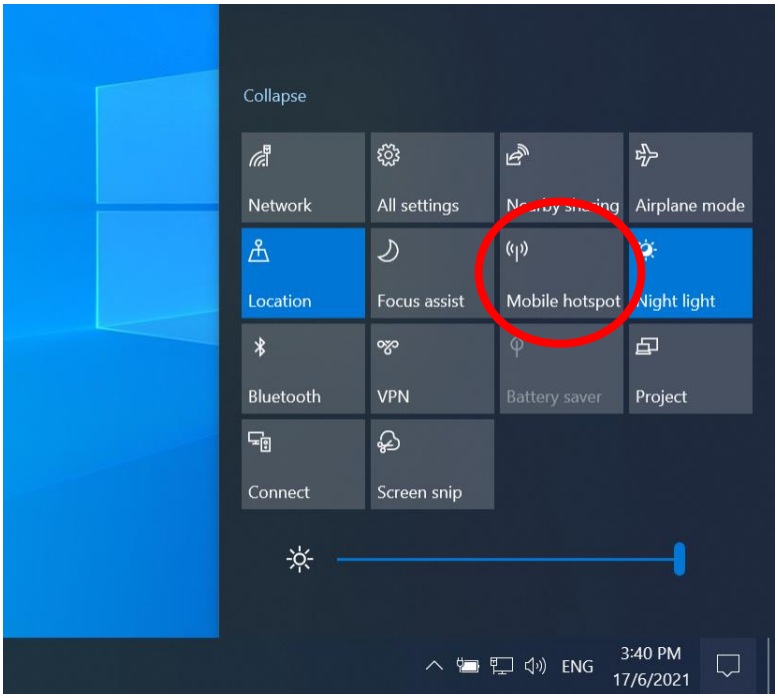
2. Remote access test

It would be hard to track the status of the nano while the car is running around, so another form of accessing it would be necessary. Here this guide would teach you how to control the nano via VNC viewer to a vino VNC server running on the nano, on a Windows computer.

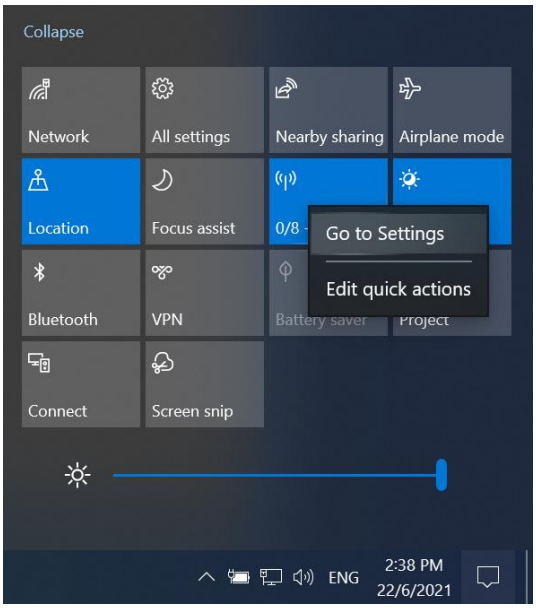
Note: The relevant software and the settings has been configured on the nano, there is no need to modify it yourself

Step 2.1

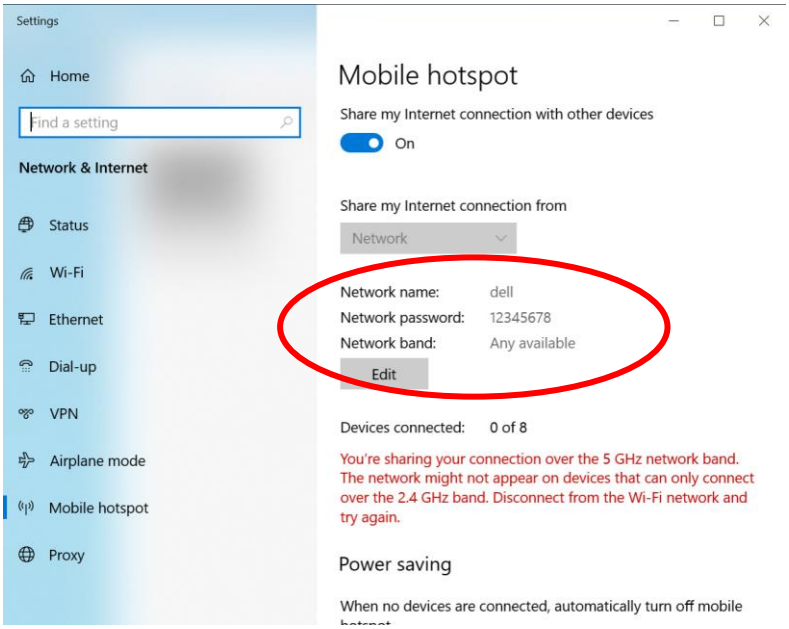
Open a hotspot from your computer by pressing Win-A and click on the hotspot tile.



Right click on the hotspot tile and select "Go to Settings"

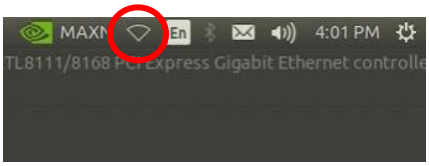


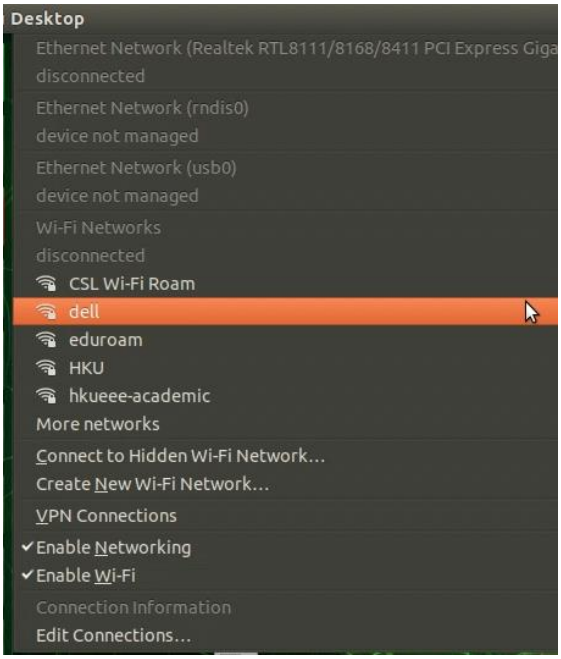
In the opened window you will see the name and password for the hotspot



Step 2.2

Connect to the wifi hotspot in nano by clicking on the wifi icon on the top bar

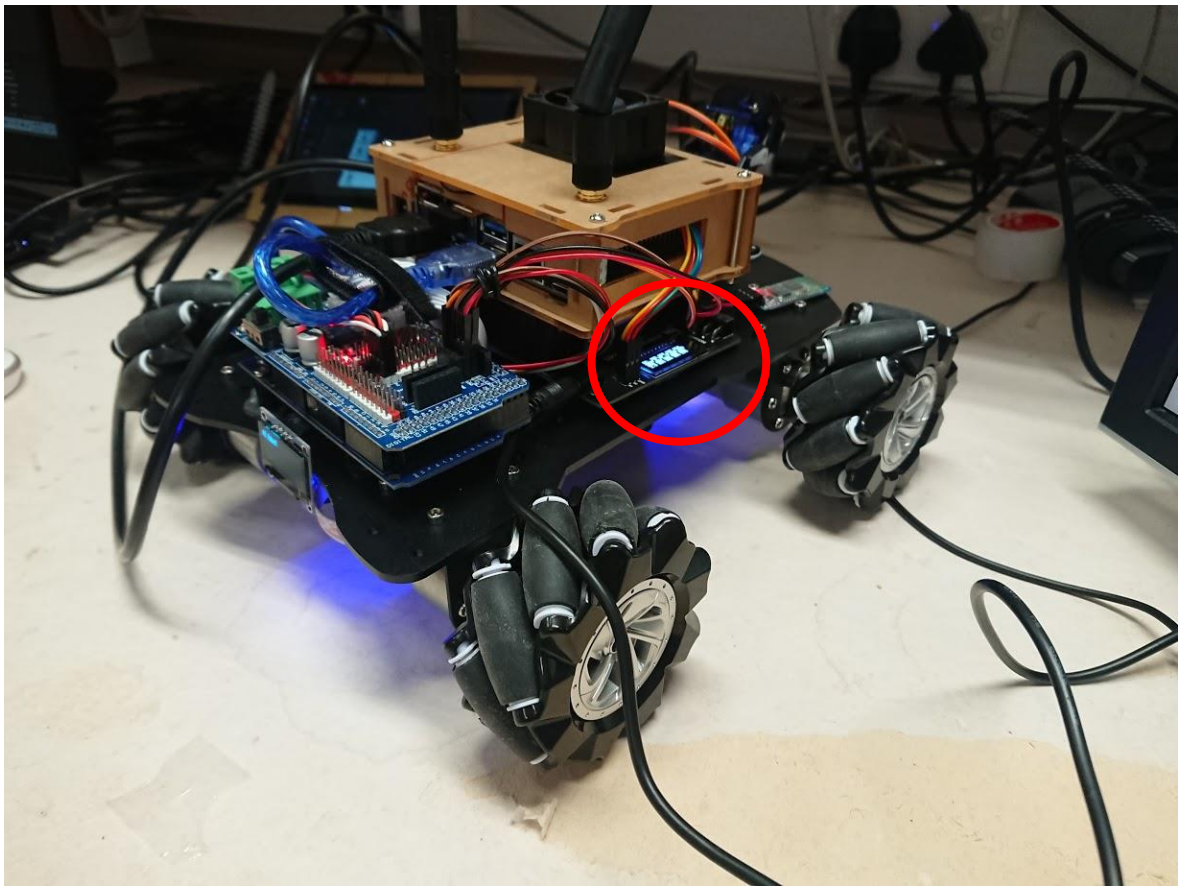




Enter the password if there is one

Then the OLED on the power module should display an IP address, that's the ip of the nano on the network.

Note: Always check if the nano connected to YOUR hotspot




8.4V
5V
5V
GND


IP: 192.168.[redacted].[redacted]
PWR CPU GPU RAM DSK
1.9 34% 00% 32% 53%

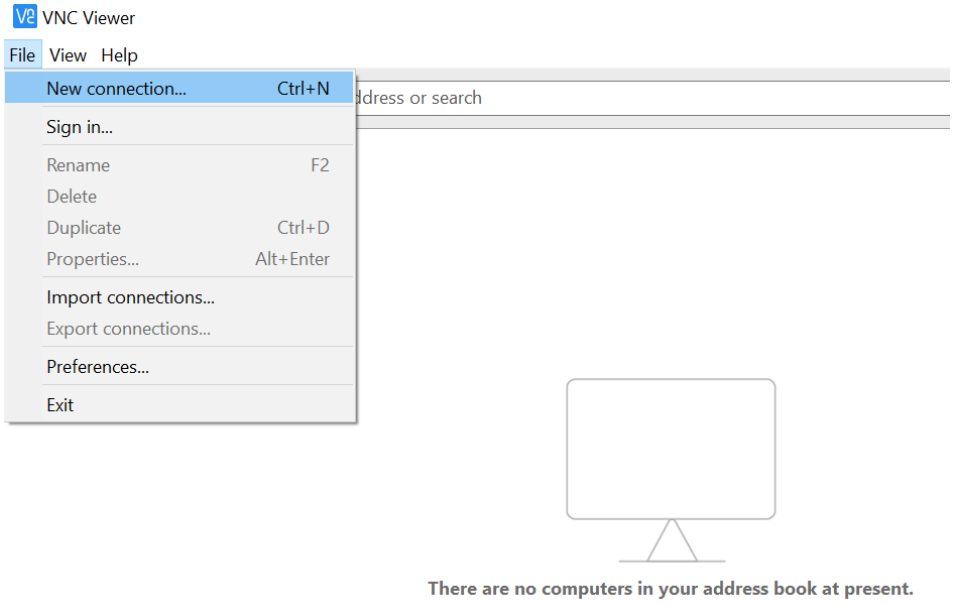
Step 2.3

Setup VNC Viewer

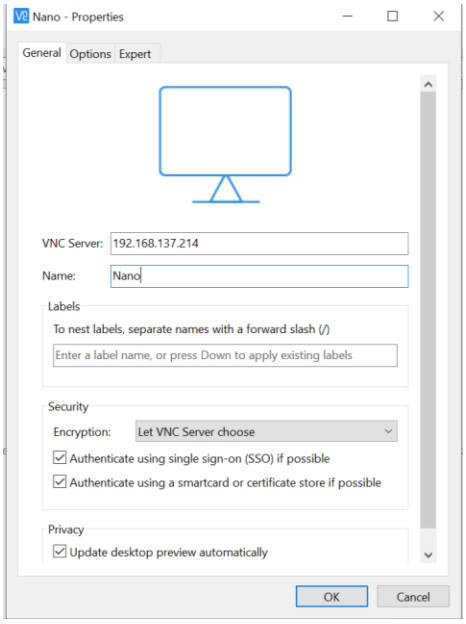
After that, go to a windows computer (preferably a computer in the lab) and connect to the same network.

Then install vnc viewer from https://www.realvnc.com/en/connect/download/viewer/

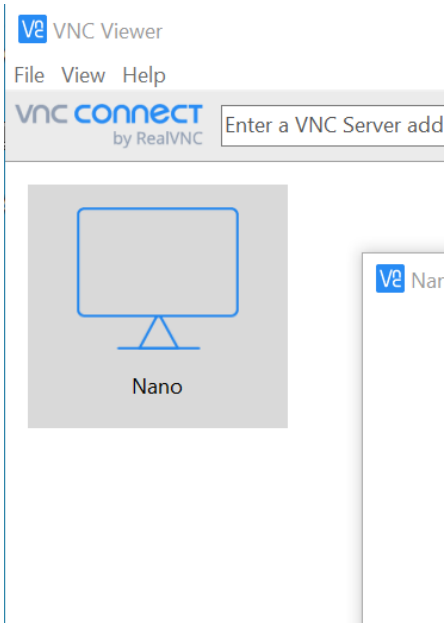
After installing, open the view and click File->New Connection from the context menu.



Enter the IP address in the pop-up window and click OK



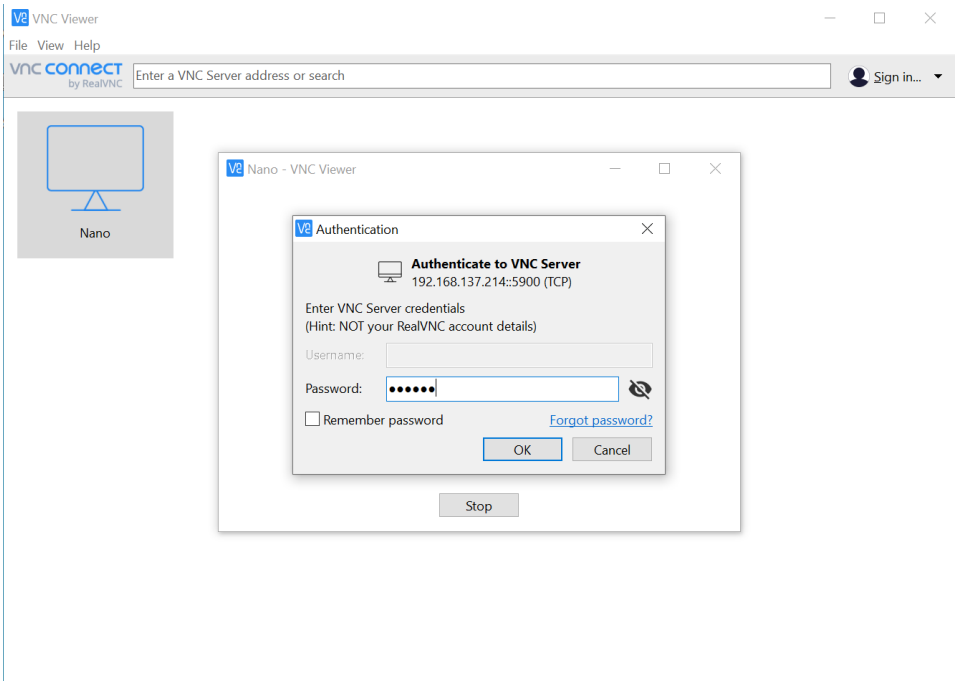
Now a new item would appear on the interface



Step 2.4

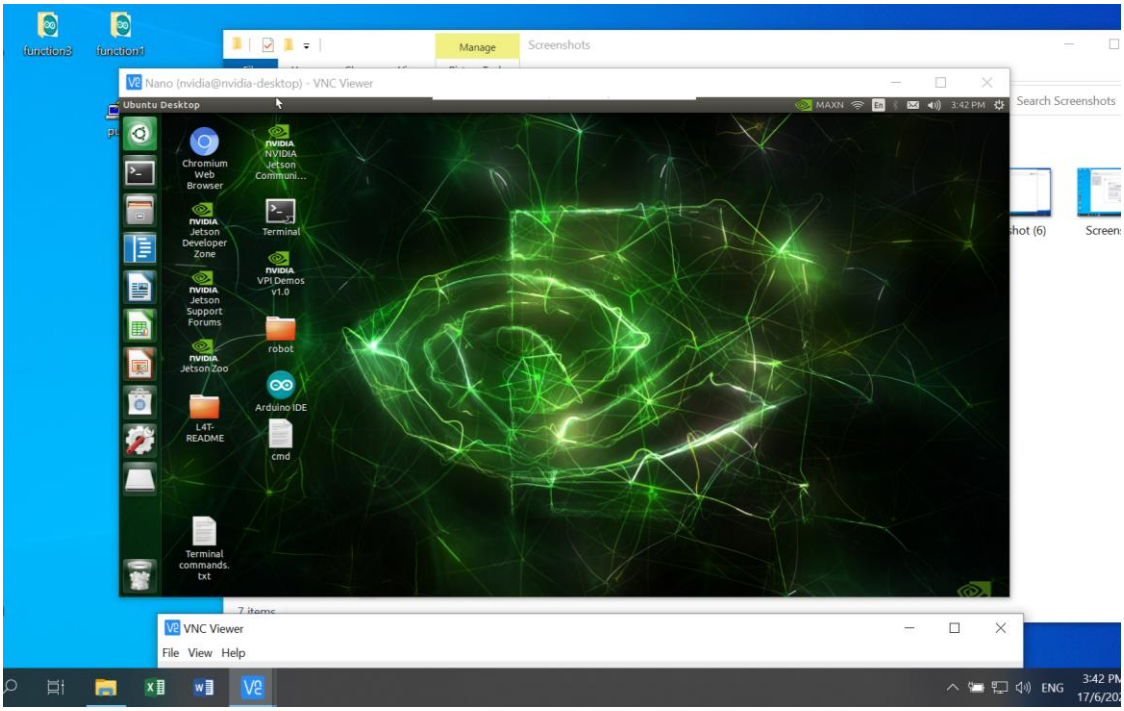
Connect to VNC viewer

Double click on the connection you just created.



Now enter the connection password "nvidia"

Then the nano desktop should appear



Now you are able to connect and control your nano even without the display with you.