USING VNC - VIRTUAL NETWORK COMPUTING

Edmond Lascaris - Creative Commons - 9 March 2021

OVERVIEW

It is possible to access your Raspberry Pi safely within your home network.

We use a software product called VNC - which is short for Virtual Network Computing.

It allows you to take control of the Raspberry Pi remotely.

LEARNING OBJECTIVES

- Learning how to install VNC - Virtual Network Connector
- Finding the IP address on your Raspberry Pi
- Connecting to your Pi using VNC
- Setting up a Static IP Address for your Pi
- Changing Raspberry Pi password

WEEK 3: LESSON 3: PART 2: USING VNC - VIRTUAL NETWORK COMPUTING

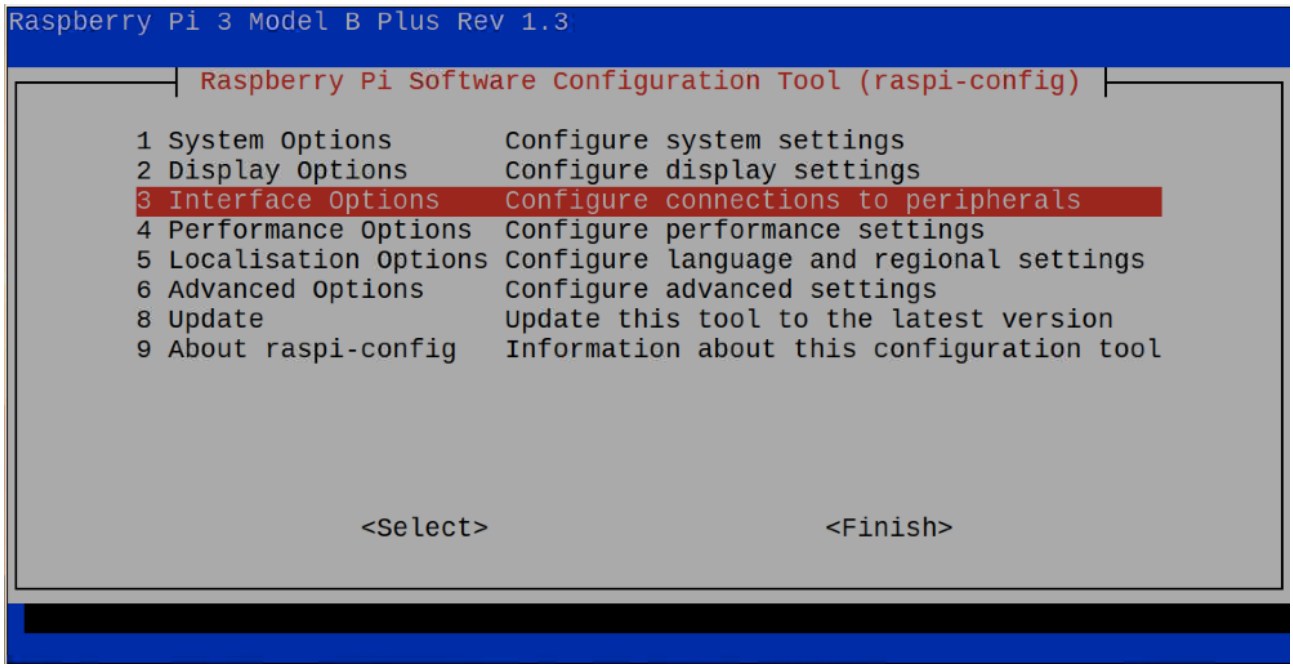
ACTIVATING VNC ON THE PI

Rather than always using your Raspberry Pi directly there is an option to access it remotely, to do this we need to use some software called VNC (Virtual Network Computing). This software allows you to remotely access the Pi computer from another computer. The other computer can be on the same network or anywhere on the internet.

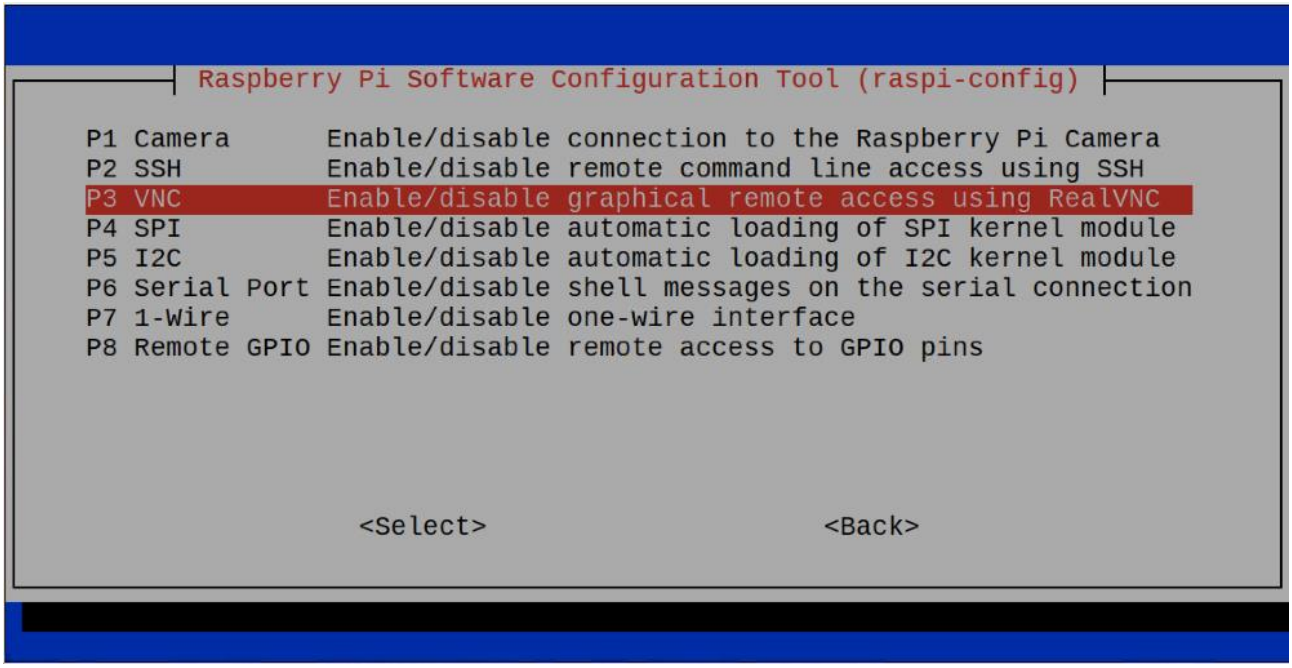
- To set up VNC open the Terminal on the Pi.
- Enter the command sudo raspi-config

```
pi@raspberrypi:~ $ sudo raspi-config
```

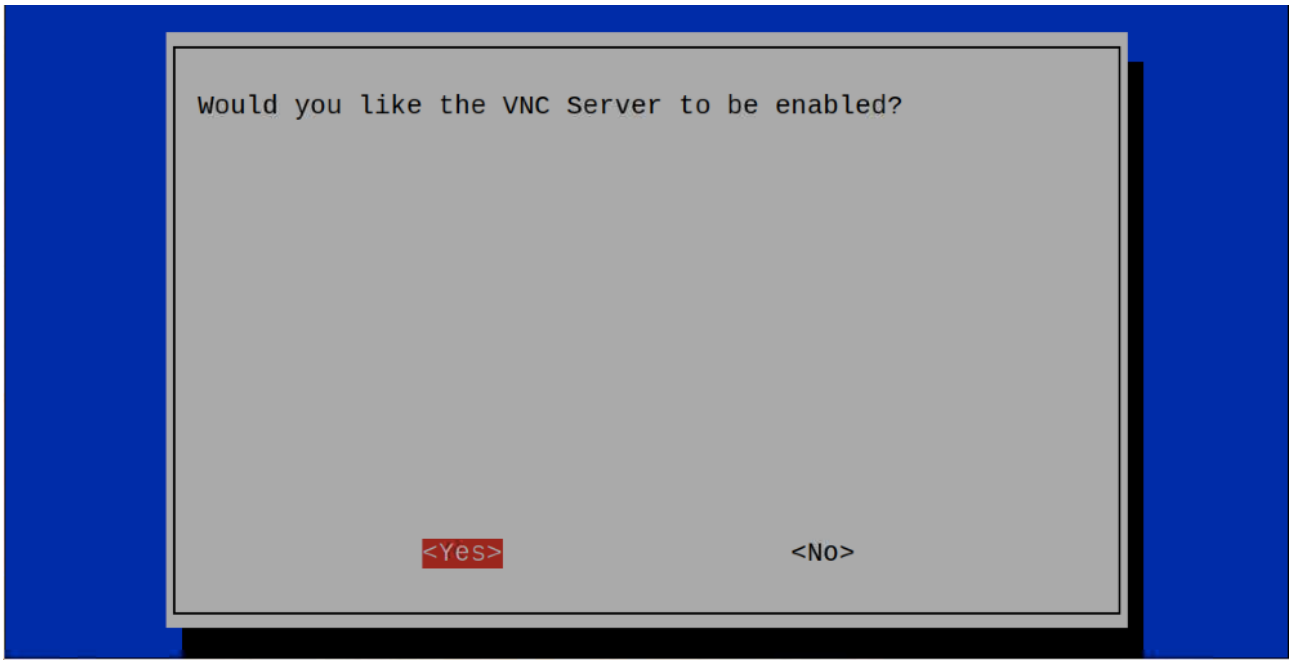
- Then choose Interfacing Options.



- Then choose VNC



- The computer will ask if VNC services are to be activated- choose Yes.



- It will then state that VNC services have been activated.

- To get out of raspi-config use the Tab key and select <Finish>

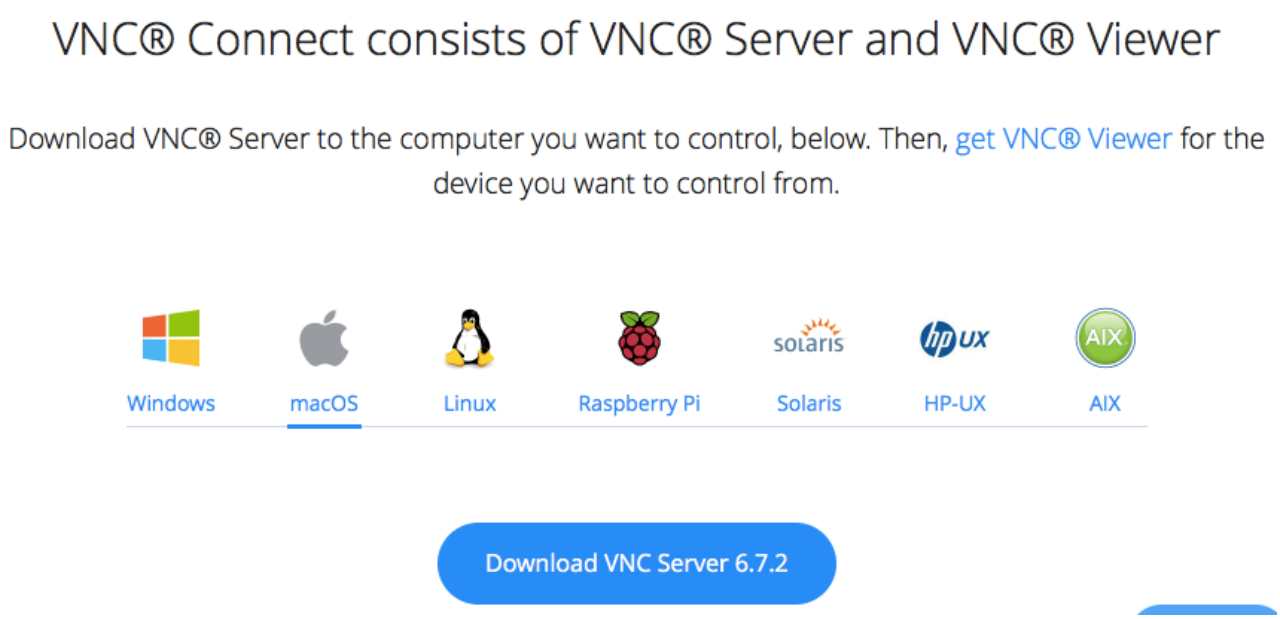
DOWNLOADING VNC ONTO YOUR COMPUTER

To access your Pi using VNC you need to install VNC Viewer on your computer. You will need to do this on a separate computer (computer that is not connected to the Raspberry Pi) for example the computer you are connecting to the zoom call (e.g. laptop or home computer)

- Copy the link below into your browser to download **VNC Server and Viewer**

https://www.realvnc.com/en/connect/download/vnc/

- If you have a Raspberry Pi, VNC Server is already installed.



- Select the type computer you have and download (Windows, macOS, Linux)

FINDING THE IP ADDRESS OF YOUR PI COMPUTER

To use VNC you first need to find the IP address of your Pi computer on the network. There are two easy ways to find the IP address on your Pi:

1. **Accessing IP through WIFI connection**

- One way is to hover your mouse cursor above the Wi-Fi symbol at the top right of the Desktop.

If you are connected to your home internet using Wi-Fi then you should see something like:

- wlan0: Associated with ....
- wlan0: Configured 192.168.0.32/24
- In this case the IP address of my Pi is 192.168.0.32
- Keep note this IP address.

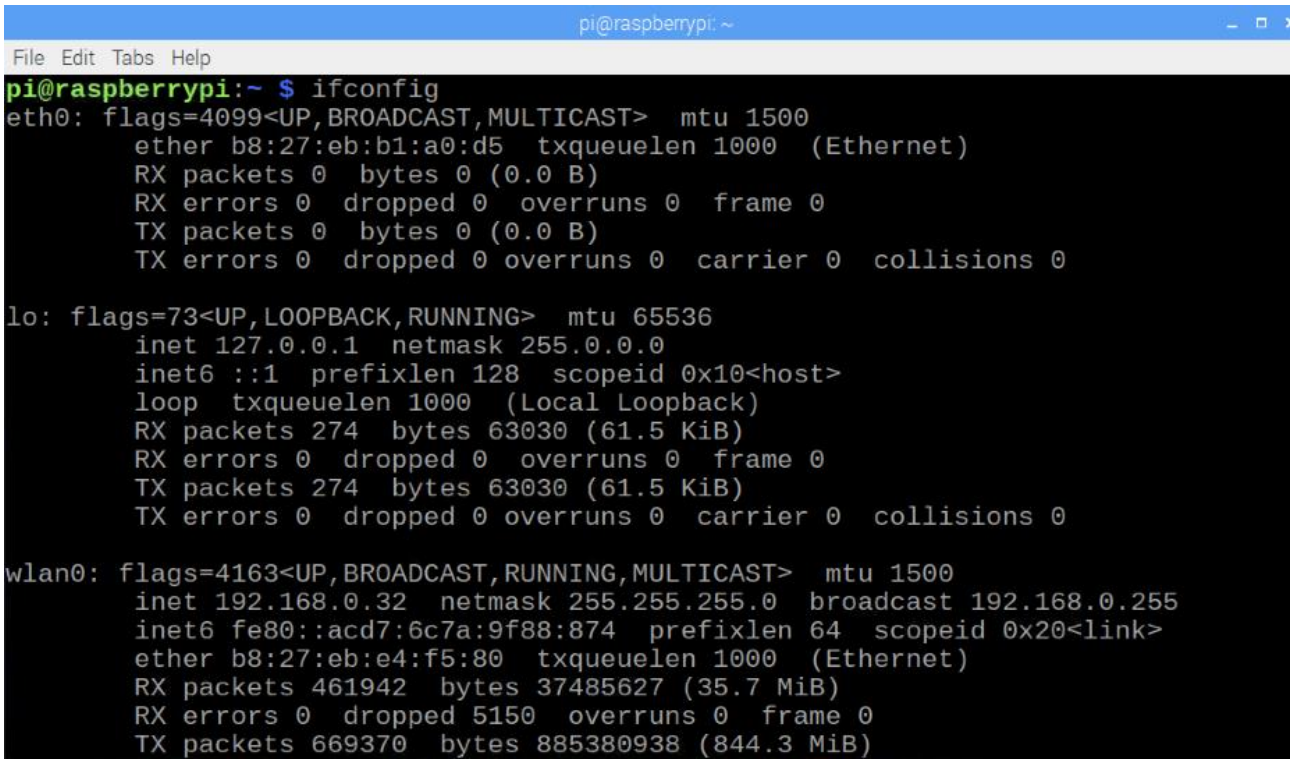
2. Accessing IF through Raspberry Pi Terminal

- Open the Terminal on your Pi.
- Enter the command ifconfig
- You should see a whole page of information.
- On the left hand side of the Terminal display look out for the tags
- eth0:
- lo: and
- wlan0:

If you are connected to your home network using Wi-Fi then in the **wlan0:** section look for an IP address.

On my Pi it looks like:

- inet 192.168.0.32 netmask 255.255.255.0 broadcast 192.168.0.255
- In this case the IP address is 192.168.0.32.



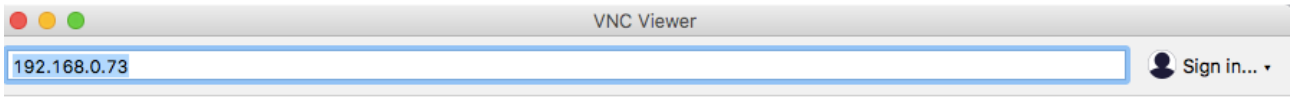
- You can also enter the command hostname -I to find your local IP address.

CONNECTING TO YOUR PI USING VNC

Once you have installed VNC on your computer you can use it to connect to your Pi

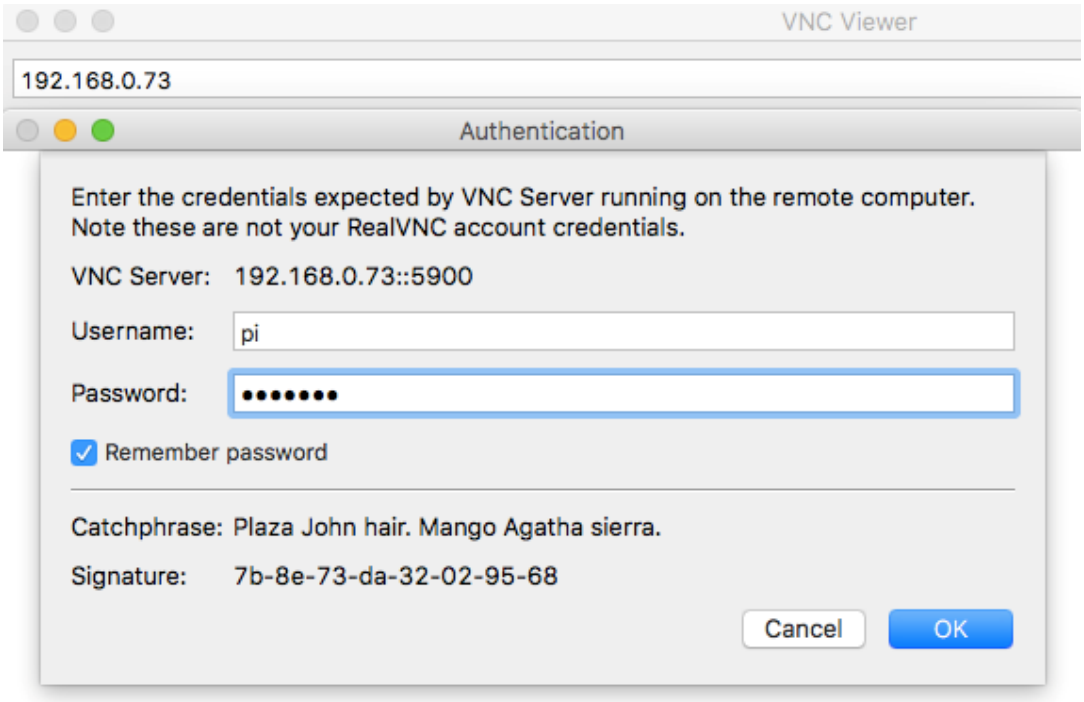
- Head back to the computer that you installed the VNC software on
- Open VNC
- In the top search bar in VNC your should enter the IP address of the computer you want to access.
  - The search bar displays the message - "Enter the VNC server address..."
- Enter the IP address of your Pi computer.

- In my case I would enter 192.168.0.73



VNC will then ask for a username and password.

- username is pi
- password is the one you chose from last week (See instruction below to change password again if needed)
- You can choose for VNC to remember the password.



- You should now be able to see the Desktop of you Pi.
- All interactions with the Pi are the same as if you were directly in front of it.

CHANGING YOUR RASPBERRY PI PASSWORD

SMART CITIES

City of Whittlesea

www.whittlesea.vic.gov.au

BANYULE NILLUMBIK TECH SCHOOL

WHITTLESEA TECH SCHOOL