

## Using a windows laptop

1. If you have your RPi3 connected to a display then go to the command line and type the following to install TightVNC and give you remote access to your RPi3.

**sudo apt-get install tightvncserver**

[if you completed this step successfully, then jump to step 6]

2. If you don't have a display connected on your RPi3 don't worry, you can remotely login to your device and obtain its IP address. Use the following steps:

2.1. Download Angry IP scanner which identifies all the devices connected within a specified range of host addresses. You can easy pick out the RPi3 one and see the IP address its connected on.

<http://angryip.org/>

IP Range - Angry IP Scanner

Scan Go to Commands Favorites Tools Help

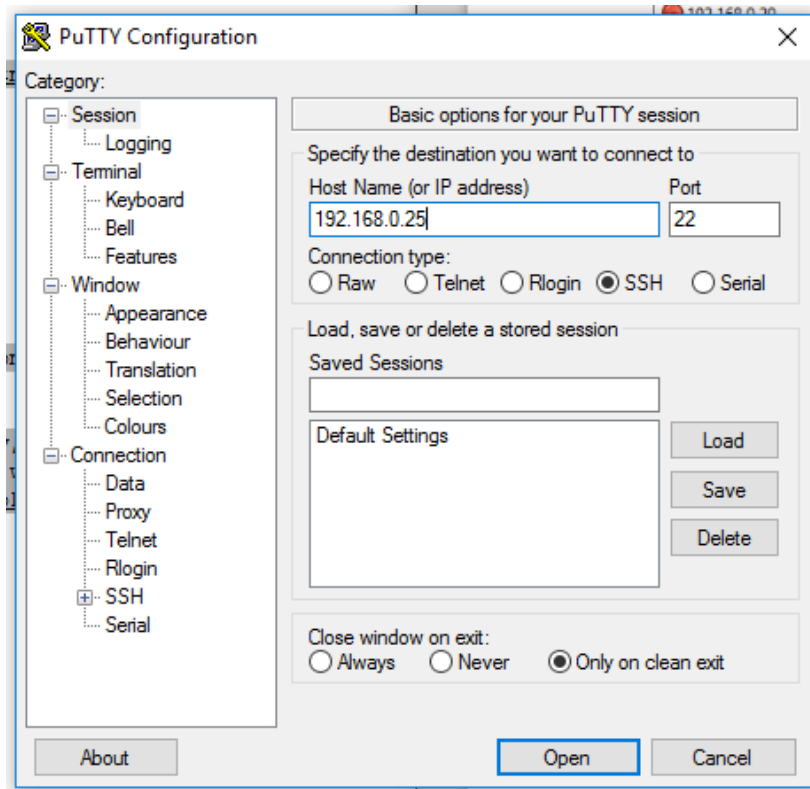
IP Range: 192.168.0.0 to 192.168.0.255 IP Range

Hostname: Dell-XPS14 IP Netmask Start

IP	Ping	Hostname	Ports [0+]
192.168.0.1	6 ms	SkyRouter.Home	[n/s]
192.168.0.2	[n/a]	[n/s]	[n/s]
192.168.0.3	[n/a]	[n/s]	[n/s]
192.168.0.4	0 ms	Dell-XPS14.Home	[n/s]
192.168.0.5	[n/a]	[n/s]	[n/s]
192.168.0.6	[n/a]	[n/s]	[n/s]
192.168.0.7	[n/a]	[n/s]	[n/s]
192.168.0.8	28 ms	android-48fed94d53565618	[n/s]
192.168.0.9	[n/a]	[n/s]	[n/s]
192.168.0.10	[n/a]	[n/s]	[n/s]
192.168.0.11	[n/a]	[n/s]	[n/s]
192.168.0.12	[n/a]	[n/s]	[n/s]
192.168.0.13	[n/a]	[n/s]	[n/s]
192.168.0.14	[n/a]	[n/s]	[n/s]
192.168.0.15	[n/a]	[n/s]	[n/s]
192.168.0.16	[n/a]	[n/s]	[n/s]
192.168.0.17	[n/a]	[n/s]	[n/s]
192.168.0.18	[n/a]	[n/s]	[n/s]
192.168.0.19	[n/a]	[n/s]	[n/s]
192.168.0.20	[n/a]	[n/s]	[n/s]
192.168.0.21	[n/a]	[n/s]	[n/s]
192.168.0.22	[n/a]	[n/s]	[n/s]
192.168.0.23	[n/a]	[n/s]	[n/s]
192.168.0.24	[n/a]	[n/s]	[n/s]
192.168.0.25	43 ms	raspberrypi	[n/s]
192.168.0.26	[n/a]	[n/s]	[n/s]
192.168.0.27	[n/a]	[n/s]	[n/s]
192.168.0.28	[n/a]	[n/s]	[n/s]
192.168.0.29	[n/a]	[n/s]	[n/s]
192.168.0.30	[n/a]	[n/s]	[n/s]
192.168.0.31	[n/a]	[n/s]	[n/s]

3. Download SSH PUTTY to remotely connect to your RPi3

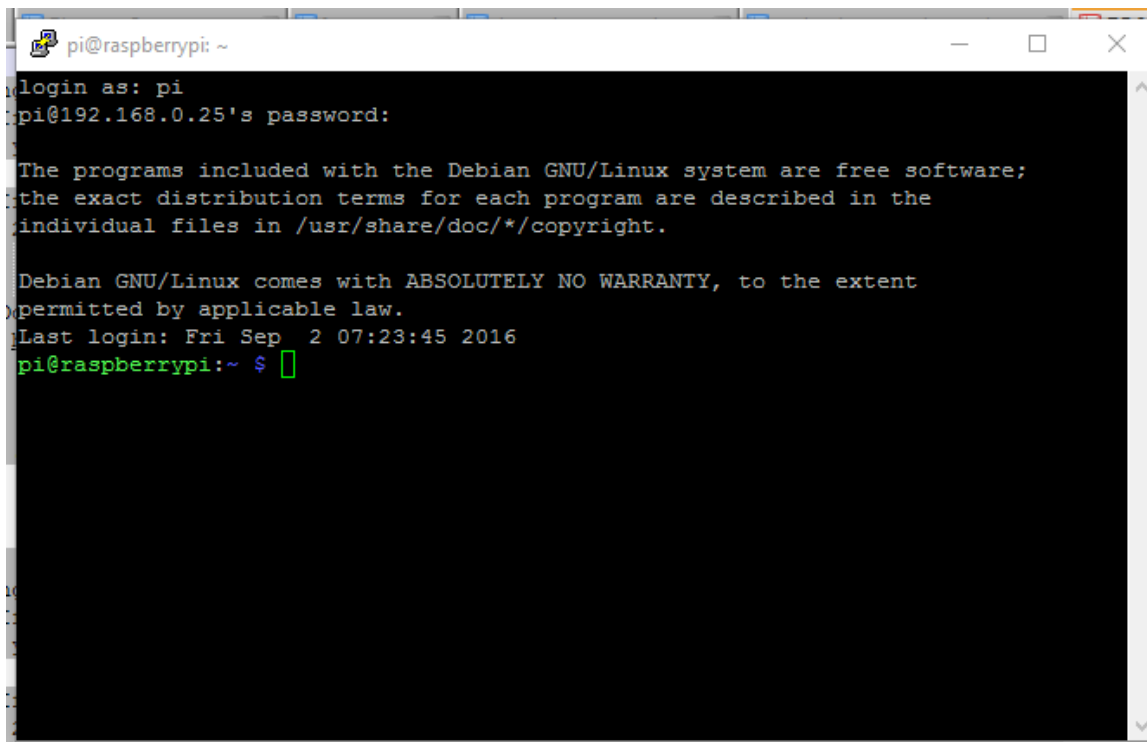
<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>



4. The Putty session will ask you to login.

Username: pi

Password: raspberry

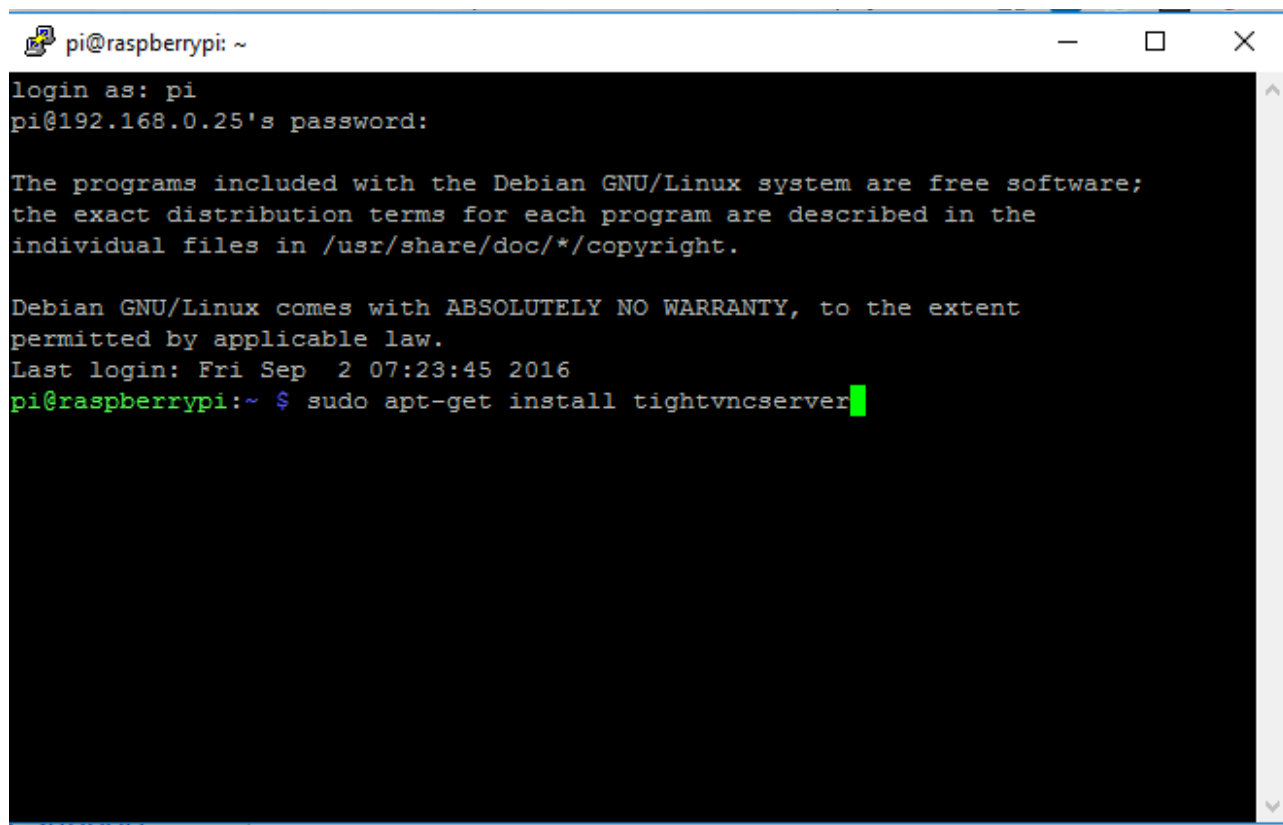
A terminal window titled 'pi@raspberrypi: ~' showing the login process. The user 'pi' has logged in from IP '192.168.0.25'. The terminal displays the Debian GNU/Linux system's free software notice and warranty disclaimer. The last login was on Friday, September 2, 2016, at 07:23:45. The prompt is 'pi@raspberrypi:~ \$' with a green cursor.

```
pi@raspberrypi: ~
login as: pi
pi@192.168.0.25's password:

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Sep  2 07:23:45 2016
pi@raspberrypi:~ $
```

5. Install TightVNC on your RPi3 to give you remote access to your device.

A terminal window titled 'pi@raspberrypi: ~' showing the installation of TightVNC. The user has entered the command 'sudo apt-get install tightvncserver' at the prompt. The terminal displays the same Debian GNU/Linux system's free software notice and warranty disclaimer as the previous image. The last login was on Friday, September 2, 2016, at 07:23:45. The prompt is 'pi@raspberrypi:~ \$' with a green cursor.

```
pi@raspberrypi: ~
login as: pi
pi@192.168.0.25's password:

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Sep  2 07:23:45 2016
pi@raspberrypi:~ $ sudo apt-get install tightvncserver
```

6. Whether your RPi3 is connected to a display unit already or you are connecting to it remotely, the next step is to start the Tight VNC application we installed earlier. So type:

**`tightvncserver`**

```
pi@raspberrypi: ~
login as: pi
pi@192.168.0.25's password:

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Sep  2 07:23:45 2016
pi@raspberrypi:~ $ tightvncserver
```

```
pi@raspberrypi: ~
login as: pi
pi@192.168.0.25's password:

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Sep  2 07:23:45 2016
pi@raspberrypi:~ $ tightvncserver

New 'X' desktop is raspberrypi:1

Starting applications specified in /home/pi/.vnc/xstartup
Log file is /home/pi/.vnc/raspberrypi:1.log

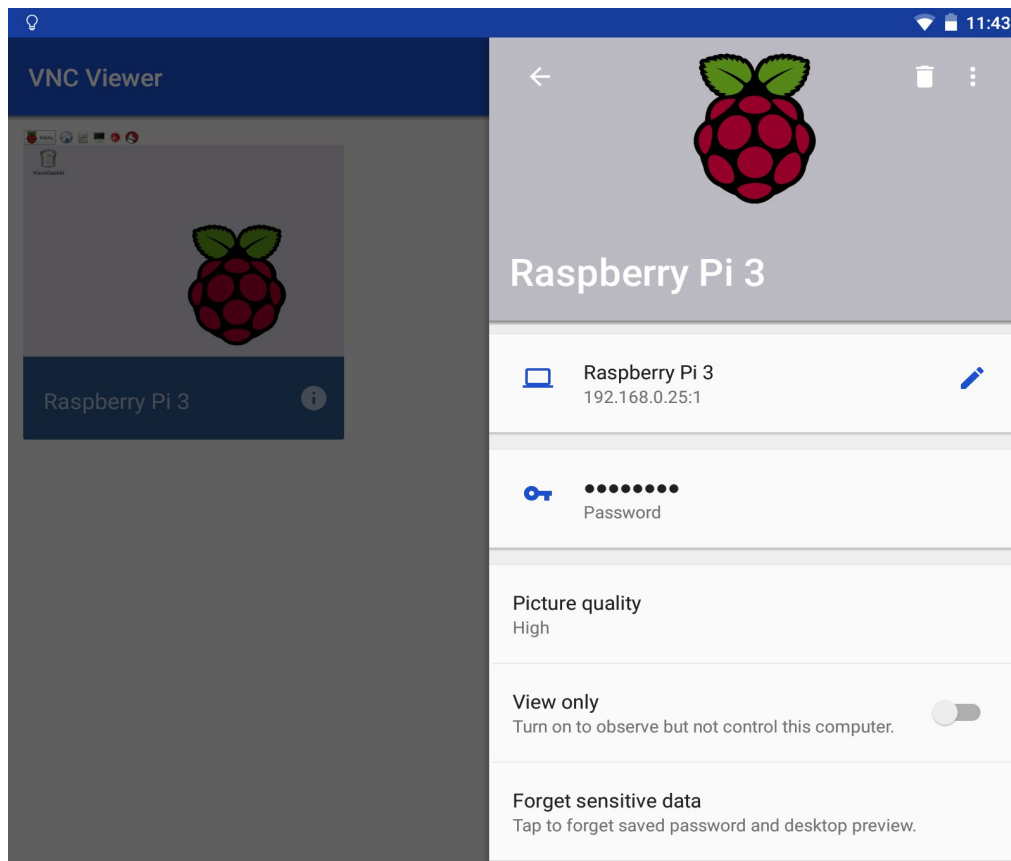
pi@raspberrypi:~ $
```

You can see that the application has been started and the raspberrypi has been assigned to port 1.

7. Download VNC Viewer for android to remotely connect.

<https://play.google.com/store/apps/details?id=com.realvnc.viewer.android>

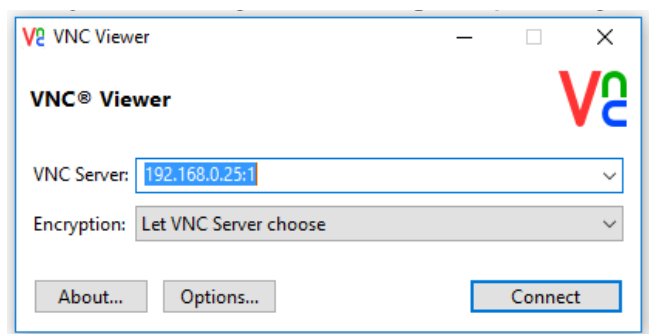
Type in the RPi3 IP address followed by the port in the format **192.168.0.25:1**.



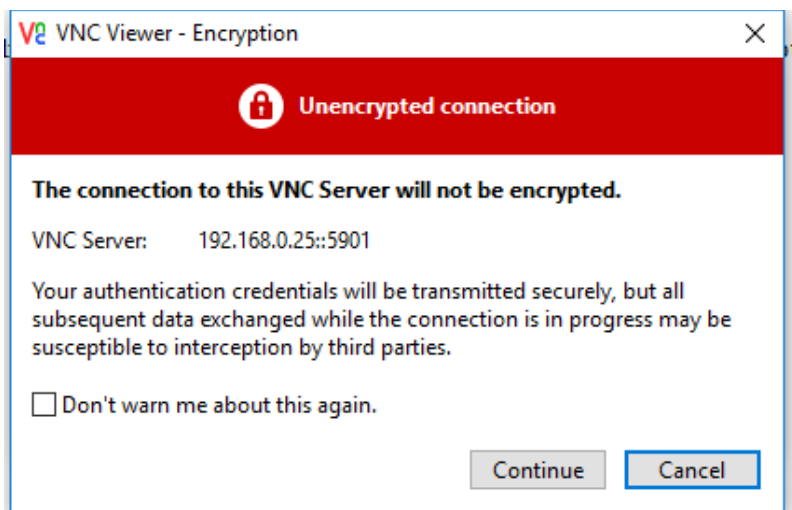
TIP: Download VNC Viewer for windows to remotely connect from your laptop as well!

<https://www.realvnc.com/download/viewer/>

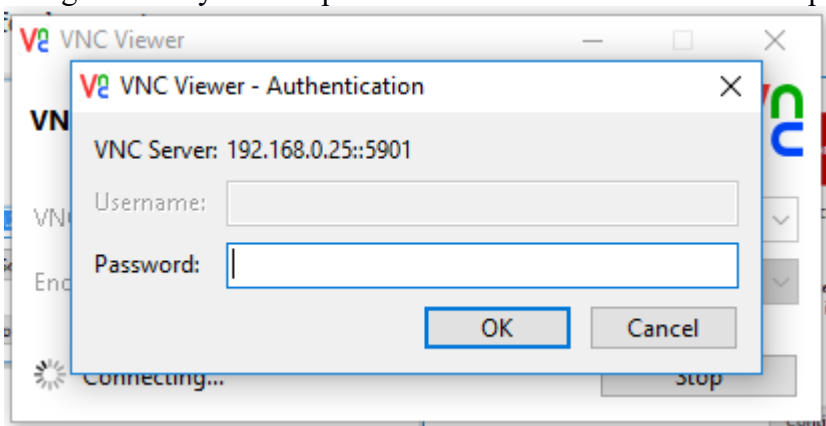
Enter the IP address of your RPi3 and the port it has been assigned to. (look at the previous step).



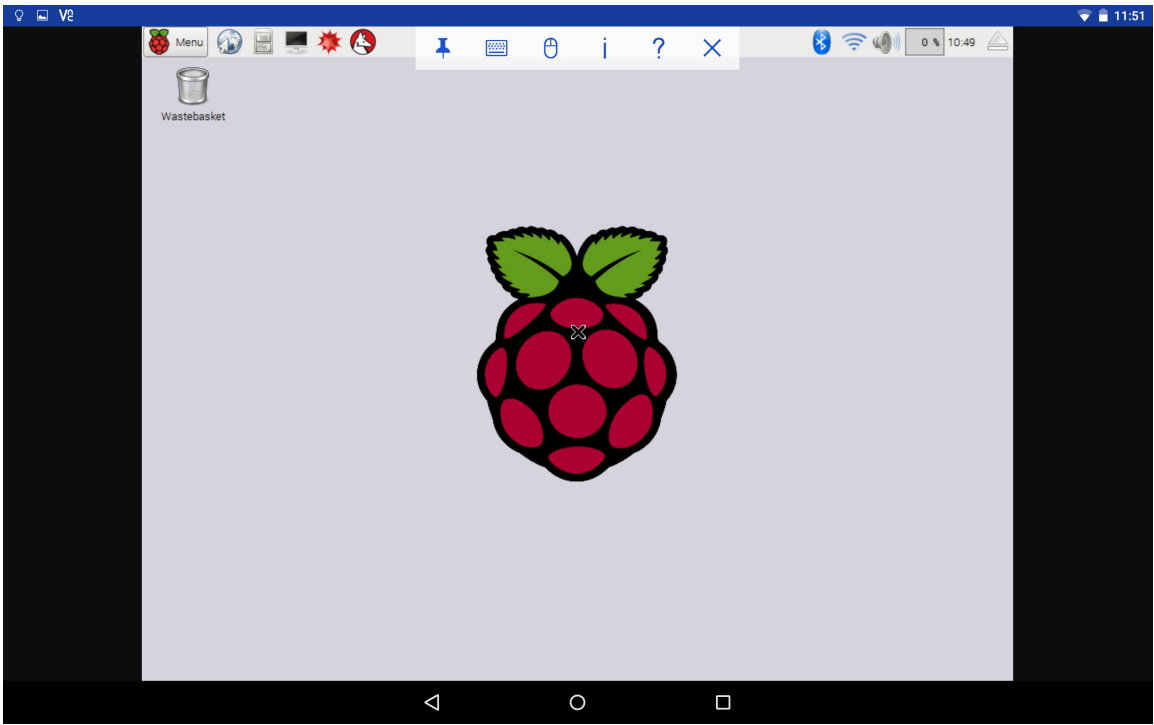
Select continue for the warning pop-up.



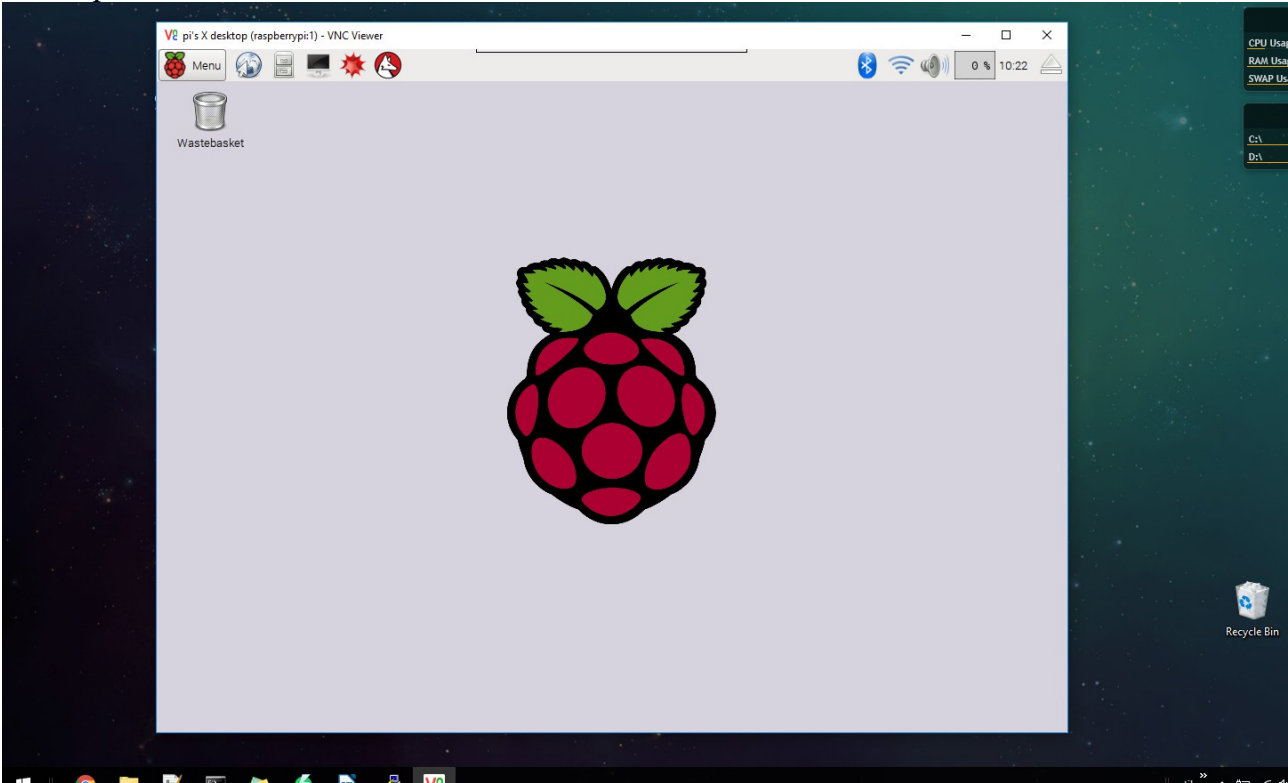
It is gonna ask you for a password the first time. Use the same password every time you log in.



AND YOU ARE IN!  
Android view:



Desktop view:



## Using your android device

1. If you have your RPi3 connected to a display then go to the command line and type the following to install TightVNC and give you remote access to your RPi3.

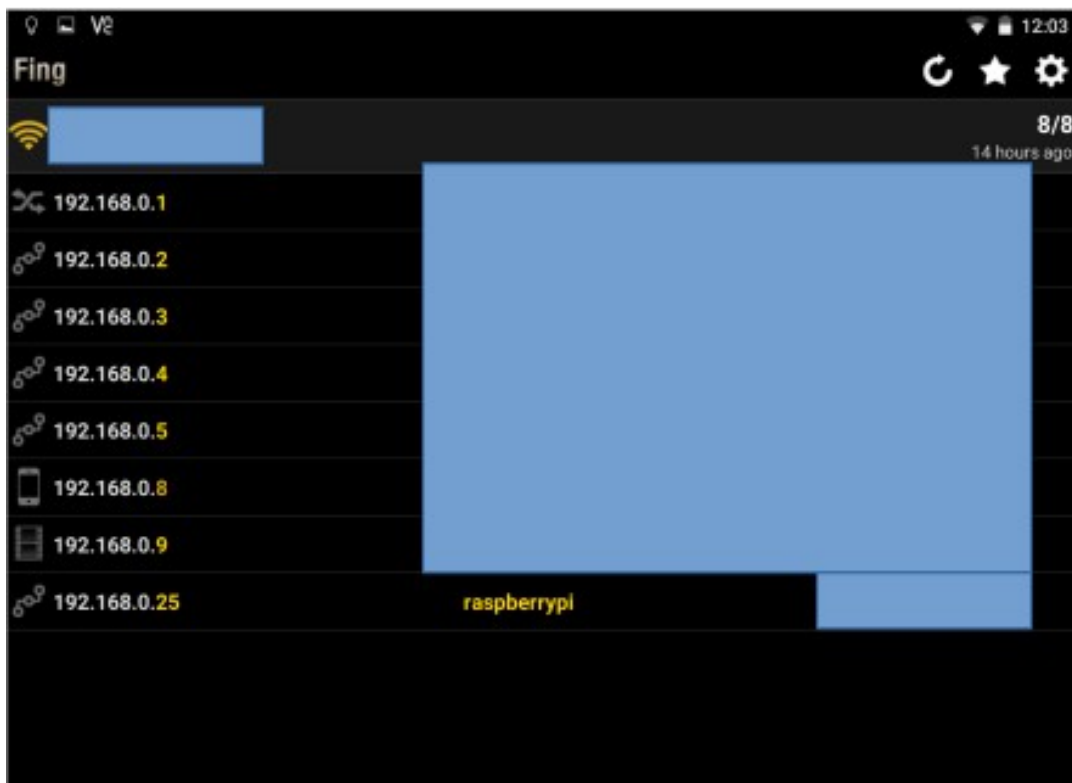
**`sudo apt-get install tightvncserver`**

[if you completed this step successfully, then jump to step 6]

2. If you don't have a display connected on your RPi3 don't worry, you can remotely login to your device and obtain its IP address. Use the following steps:

2.1. Download Fing on your android device (link below). This will show you all devices connected to your wifi. You can easily pick out the RPi3 one and see the IP address its connected on.

<https://play.google.com/store/apps/details?id=com.overlook.android.fing>



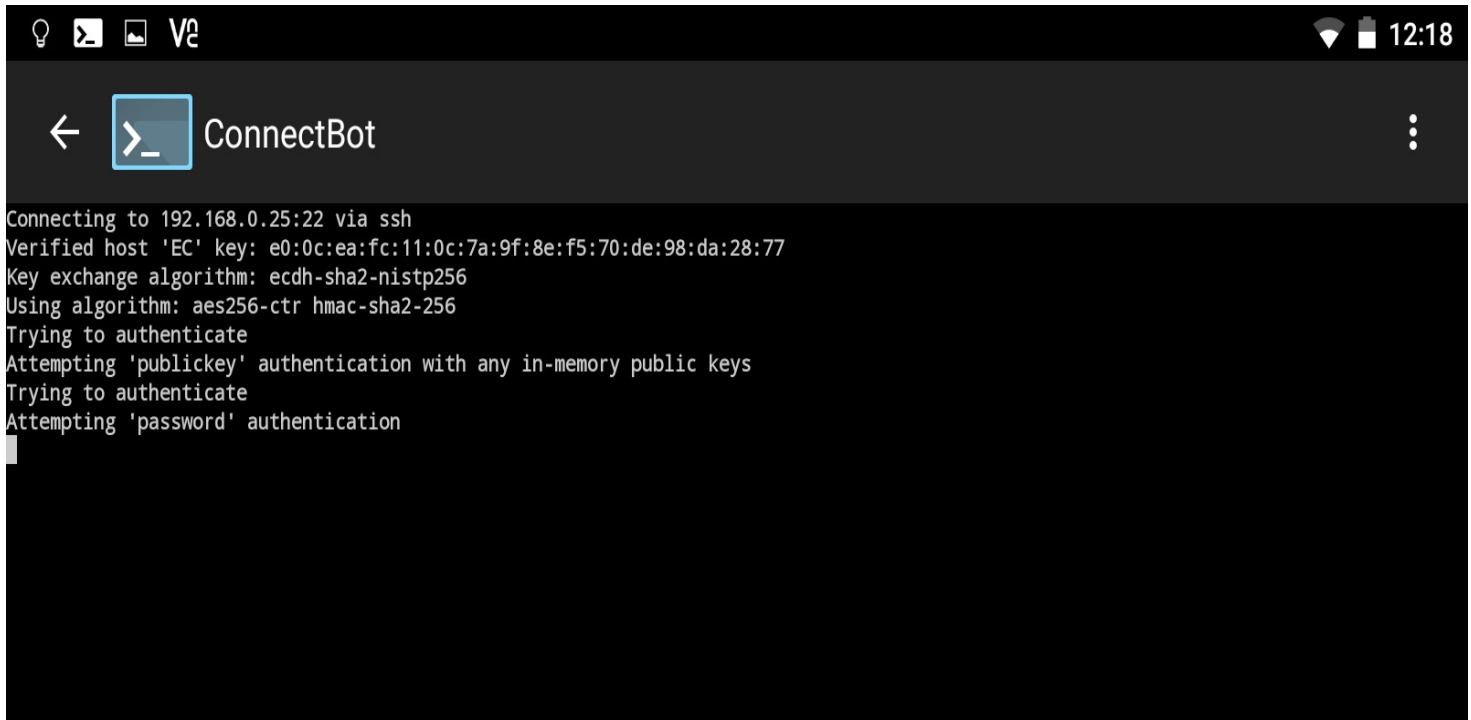
3. Download connectBot to remotely connect to your RPi3 from your android device

[https://play.google.com/store/apps/details?id=org.connectbot&hl=en\\_GB](https://play.google.com/store/apps/details?id=org.connectbot&hl=en_GB)

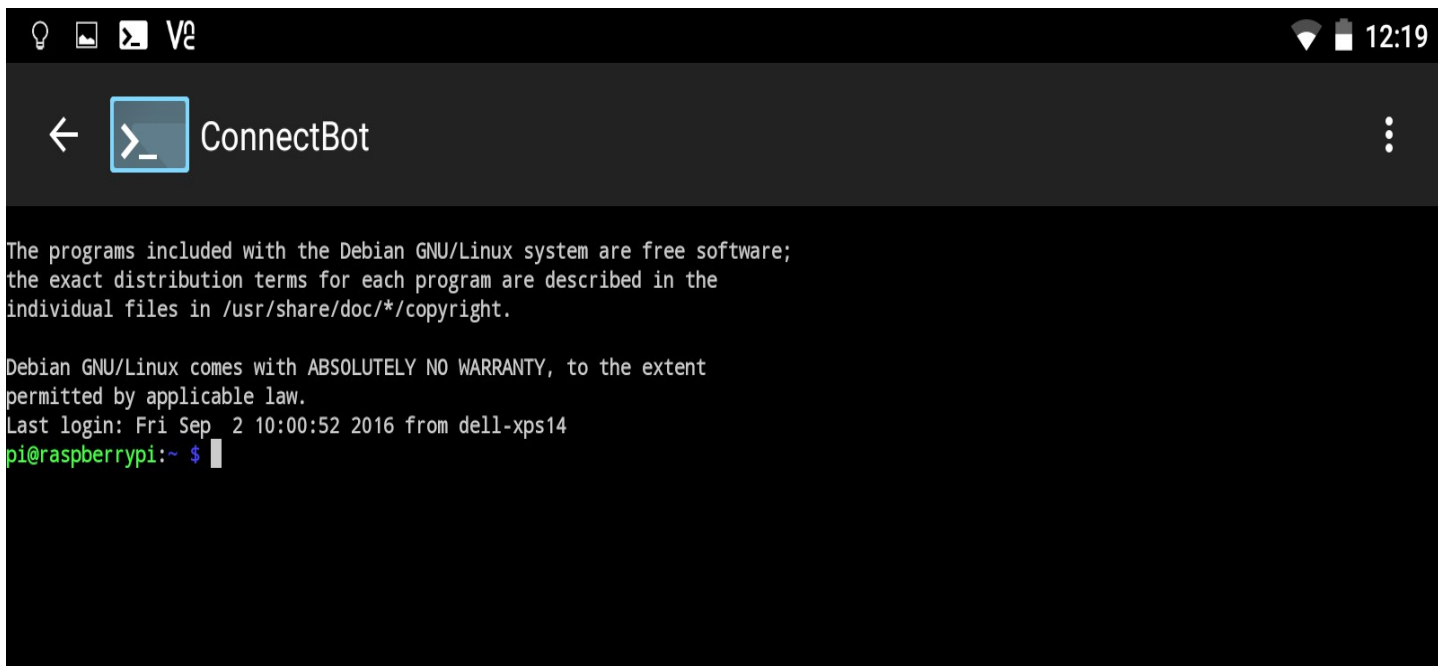
Enter your username, host and port in this format → [username@host:port](#)

Username: pi  
Host: 162.168.0.25 [your RPi3 ip address]  
port: 22 [your network's port. Same as the one used during the SSH connection through a laptop/desktop]  
connection





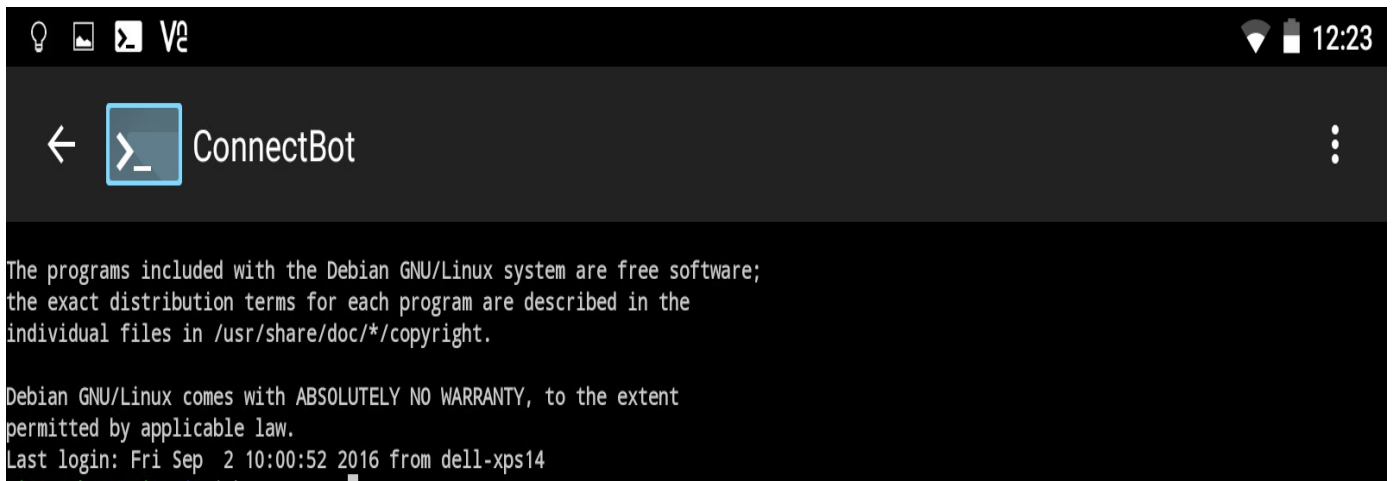
It is then gonna require a password.  
Password:     raspberry



Now you are remotely connected to your Rpi3 through your android device.

4. Fire up Tight VNC on your RPi3 using the following:

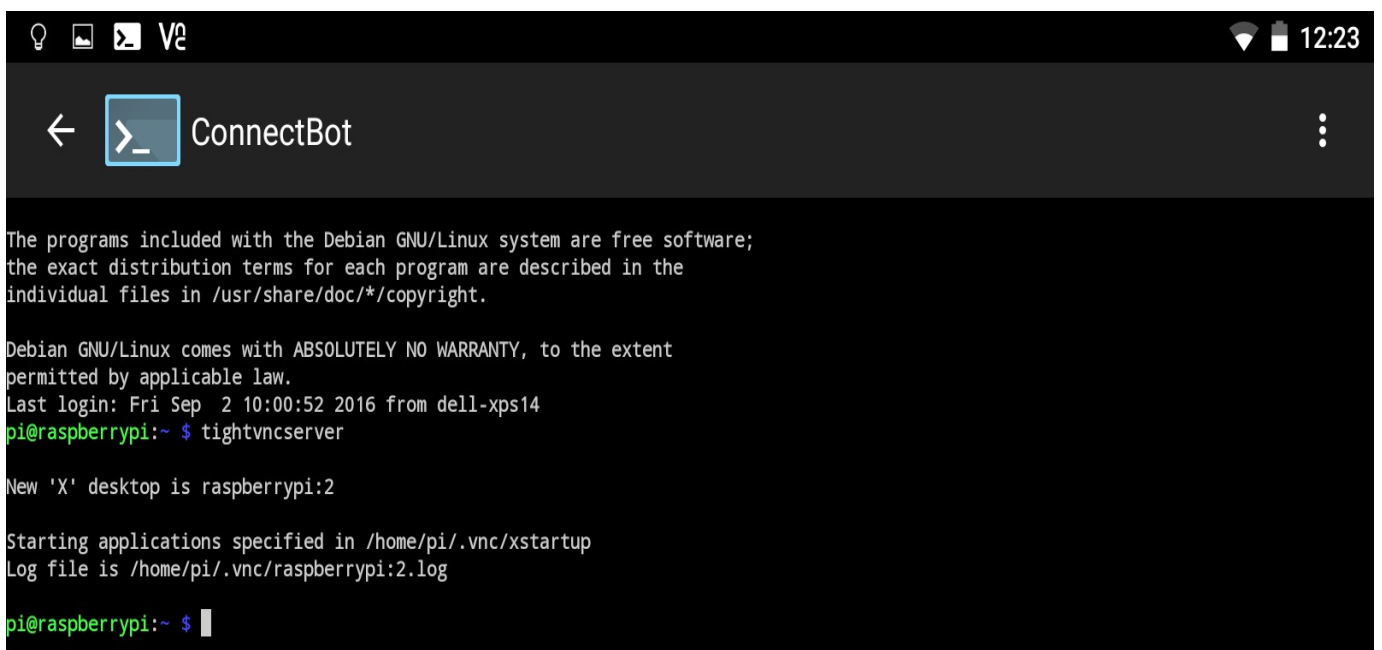
**tightvncserver**



```
⚡ 🖼️ 📶 V2 12:23
← >_ ConnectBot ⋮

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Sep 2 10:00:52 2016 from dell-xps14
```



```
⚡ 🖼️ 📶 V2 12:23
← >_ ConnectBot ⋮

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Fri Sep 2 10:00:52 2016 from dell-xps14
pi@raspberrypi:~ $ tightvncserver

New 'X' desktop is raspberrypi:2

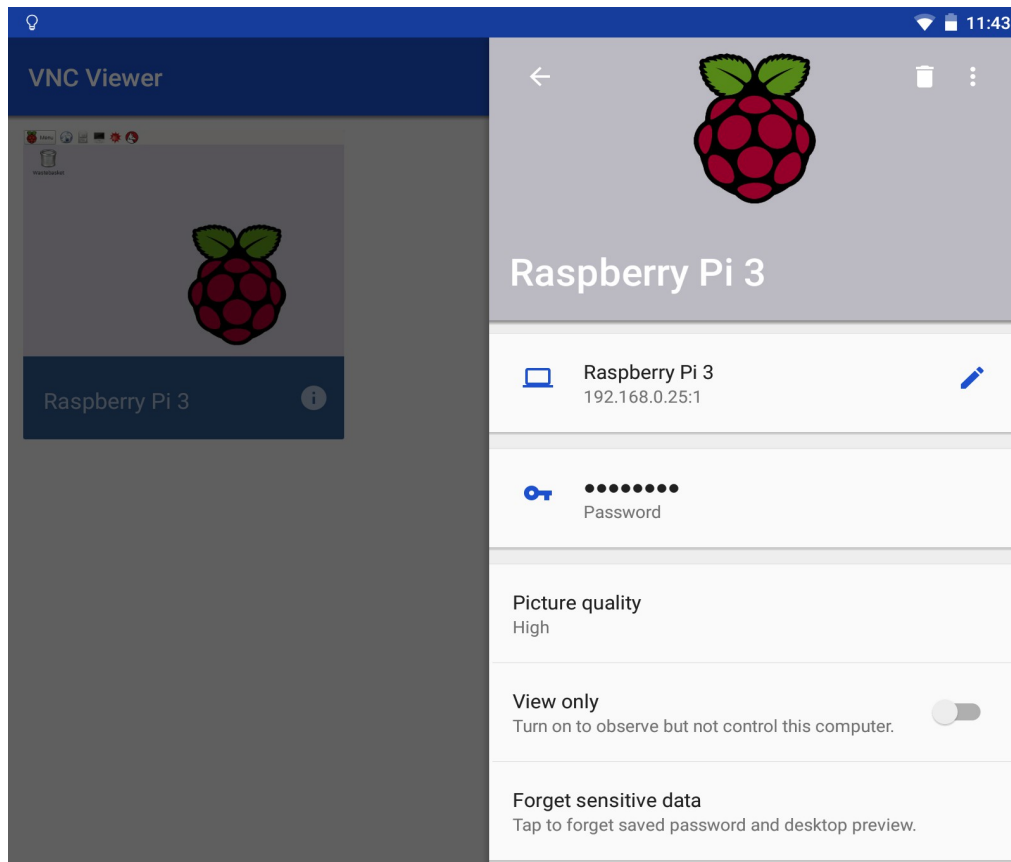
Starting applications specified in /home/pi/.vnc/xstartup
Log file is /home/pi/.vnc/raspberrypi:2.log
pi@raspberrypi:~ $
```

You can see that the application has been started and the raspberrypi has been assigned to port 2.

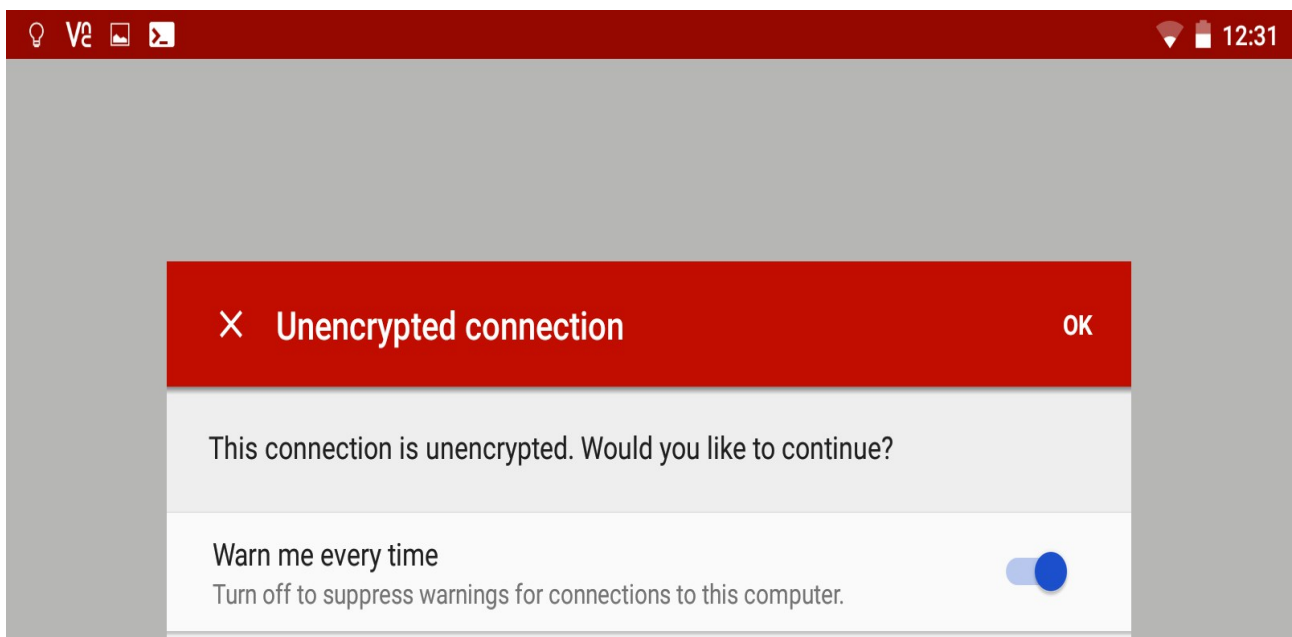
5. Download VNC Viewer for android to remotely connect.

<https://play.google.com/store/apps/details?id=com.realvnc.viewer.android>

Type in the RPi3 IP address followed by the port in the format **192.168.0.25:2**.



Select OK for the pop-up.



AND YOU ARE IN!

