

Raspberry Pi



I'm Learning about
sharing my Internet connection

Card **1** of **7**

1 You can your Pi in **Headless mode** (using TightVNC on your PC/Laptop to remotely control the Pi). To do this the Pi must first be connected to your network. You can simulate a network by connecting the Pi directly to the Ethernet Port of your PC/Laptop. (You can even power the Pi from a USB port)



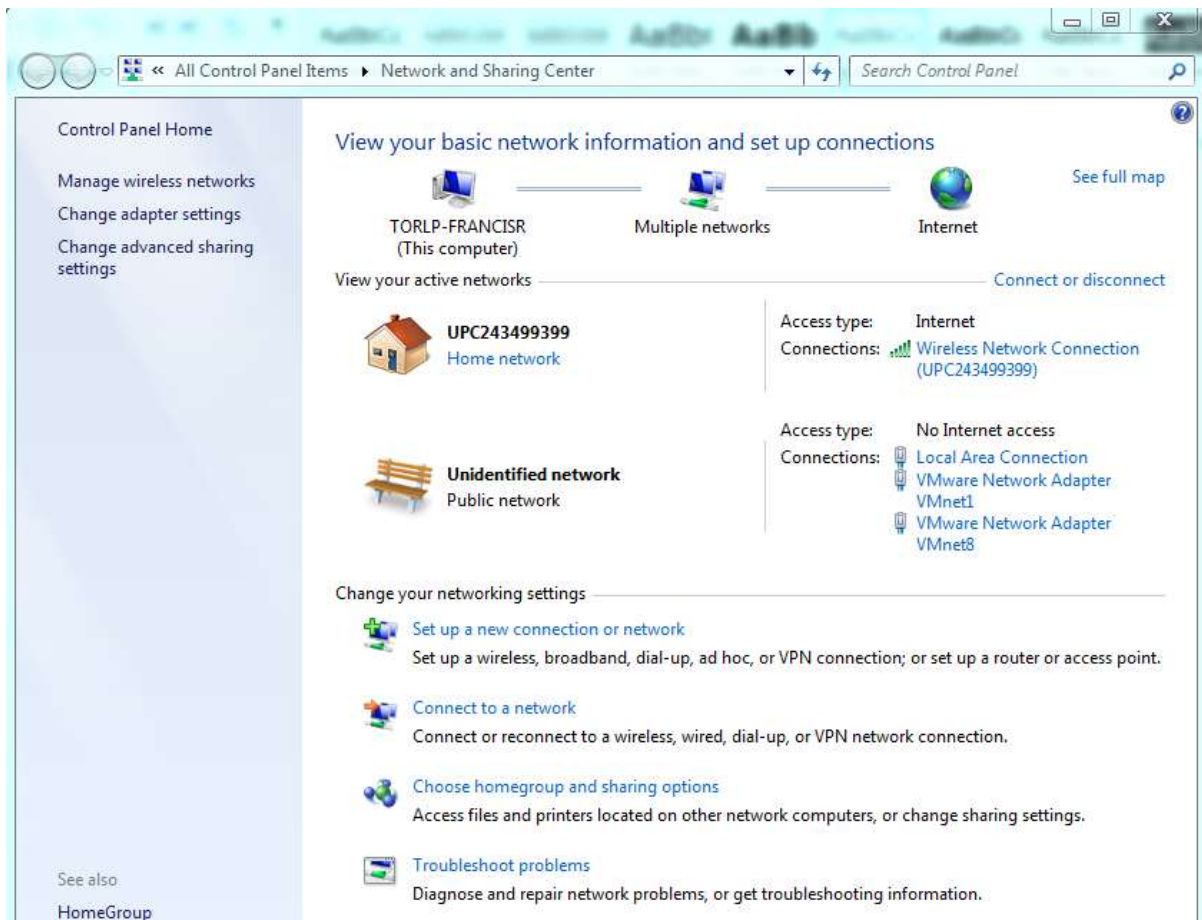
2 The first step is to enable Internet Sharing. Go to the Control Panel and Open the Network and Sharing Centre

Raspberry Pi



I'm Learning about
sharing my Internet connection

Card **2** of **7**



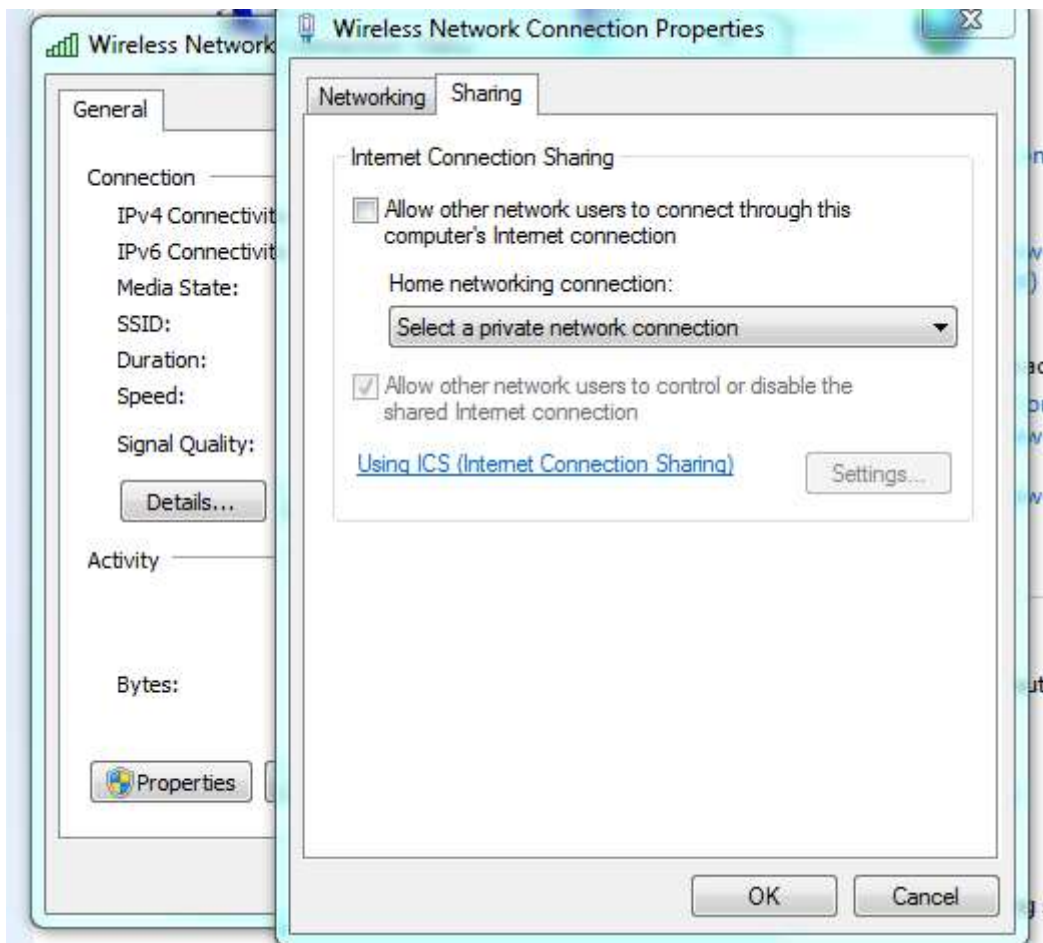
Raspberry Pi



I'm Learning about
sharing my Internet connection

Card **3** of **7**

3 Now click on the **Wireless** connection you are using to connect to the Internet, click on **Properties** and then click the **Sharing** tab.



Raspberry Pi

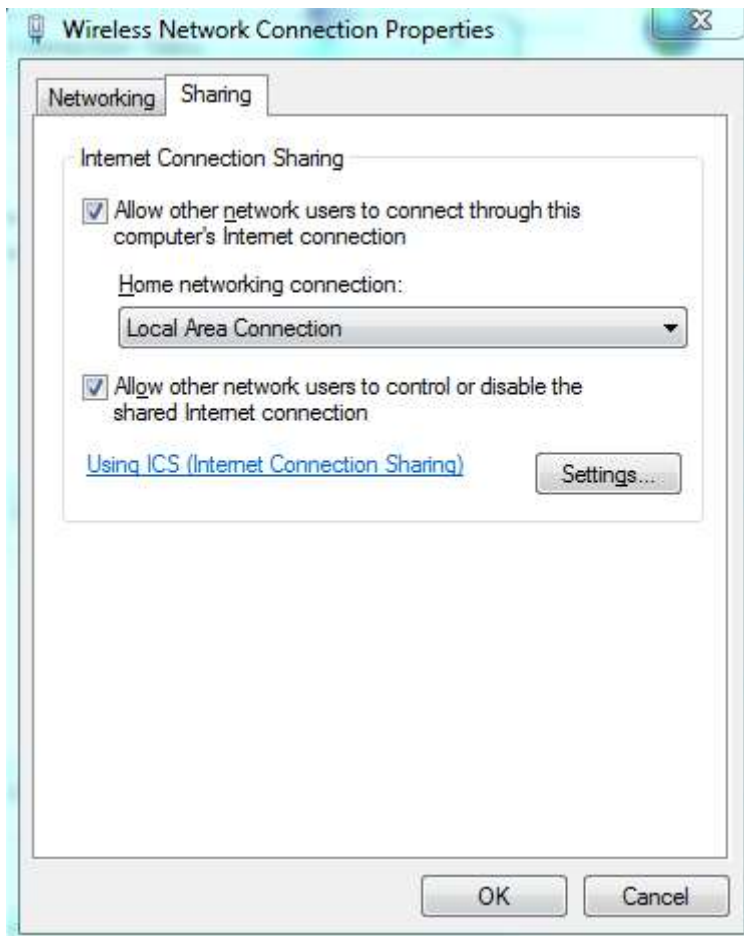


I'm Learning about
sharing my Internet connection

Card **4** of **7**

4 Now allow sharing the Wifi connection with the **Local Area Connection**.

In windows 10 the home networking drop down may not be present.



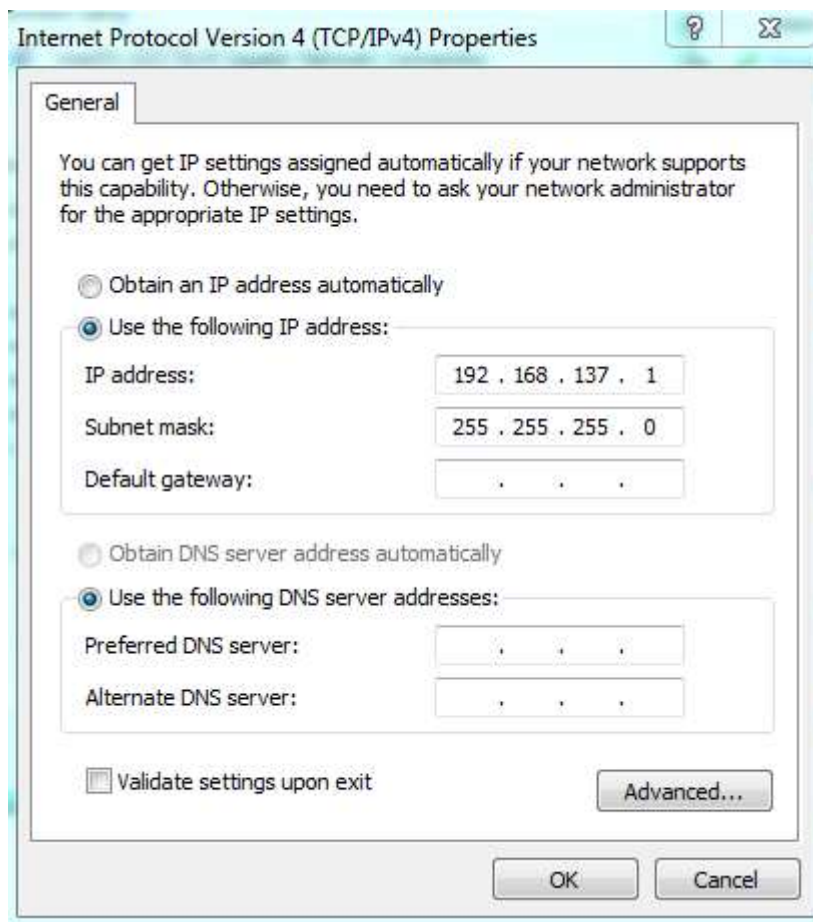
By default windows will manage a private network to the Local Area Network and will automatically provide a **private** IP Address to the Pi (or any device) connected to it.

Raspberry Pi



I'm Learning about
sharing my Internet connection

Card **5** of **7**



The Pi Address will be dynamically allocated from the same IP Range.

For Apple Mac OSX Users you can achieve the same by enabling Internet Sharing in the Sharing option of System Preferences. The Default IP Range for Mac OSX will be 192.168.2.1.

Raspberry Pi



I'm Learning about
sharing my Internet connection

Card **6** of **7**

5 The address the Pi will get may vary each time the Pi is connected. One method of finding the Pi is to ping each available IP address. A command line batch file 'findmypi.bat' is included to help automate this.

For Mac OSX users you can achieve the same using `nmap -sP 192.168.2.0/24`

Once you have run this once, you can now check the arp table to see what computers are known: run this command in a Command Prompt/Terminal Window

```
arp -a
```

```
Administrator: C:\windows\system32\cmd.exe

C:\Users\francisr>arp -a

Interface: 192.168.137.1 --- 0xd
Internet Address      Physical Address      Type
192.168.137.154       b8-27-eb-39-63-fb     dynamic
192.168.137.255       ff-ff-ff-ff-ff-ff     static
224.0.0.22            01-00-5e-00-00-16     static
224.0.0.251           01-00-5e-00-00-fb     static
224.0.0.252           01-00-5e-00-00-fc     static
255.255.255.255       ff-ff-ff-ff-ff-ff     static

Interface: 192.168.2.143 --- 0xe
Internet Address      Physical Address      Type
192.168.2.1           20-d5-bf-a2-79-7e     dynamic
192.168.2.5           00-11-32-0d-f8-a8     dynamic
192.168.2.105         00-00-85-ec-cd-de     dynamic
192.168.2.255         ff-ff-ff-ff-ff-ff     static
224.0.0.2             01-00-5e-00-00-02     static
224.0.0.22            01-00-5e-00-00-16     static
224.0.0.251           01-00-5e-00-00-fb     static
224.0.0.252           01-00-5e-00-00-fc     static
239.255.255.250       01-00-5e-7f-ff-fa     static
255.255.255.255       ff-ff-ff-ff-ff-ff     static
```

Look at the list to find the MAC Address of your Pi. You can then remotely access your Pi!

Once you have located your Pi, you can then use Putty to connect to it. To access the Desktop of the Pi you will need to install TightVNC on both your PC and your Pi. Refer to other Sushi cards in this collection to find out how to do this.

6 Finally, when using this method you may need to set the DNS address manually on the network preferences on the Pi if you want to surf the internet or download additional content to the Pi.

Raspberry Pi



I'm Learning about
sharing my Internet connection

Card **7** of **7**



8.8.8.8 is google's DNS server.