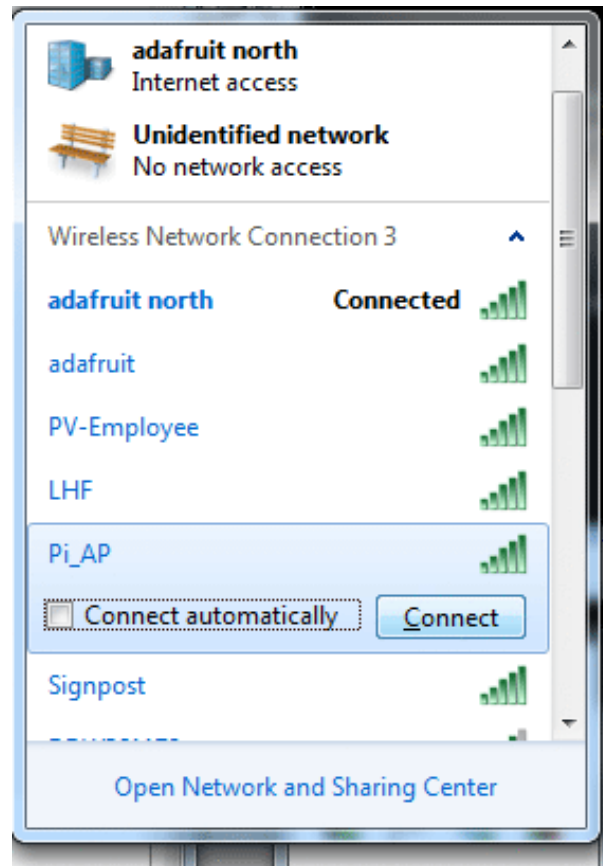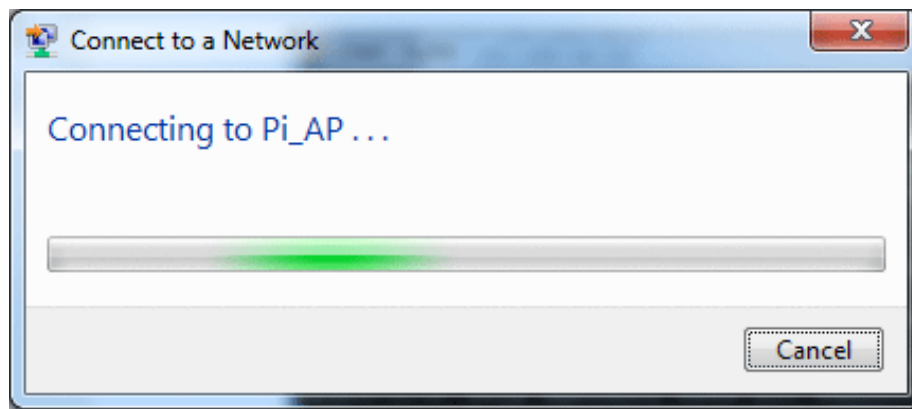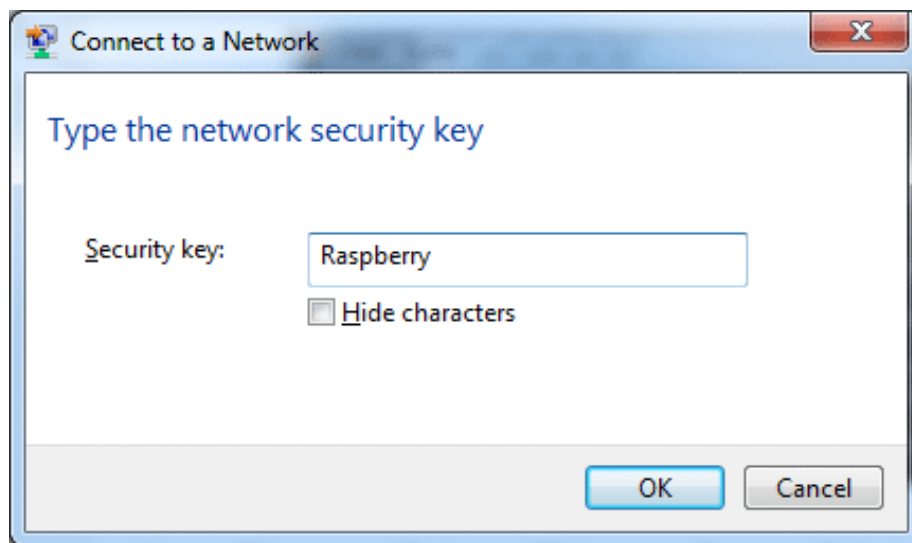# Connect and Test

Now that we have the software installed on a Pi, it's time to connect to it and test the connection. I'm using a Windows computer but any kind should work fine

On the Pi, run the command **tail -f /var/log/syslog** to watch the system log data, handy for checking and debugging whats going on!

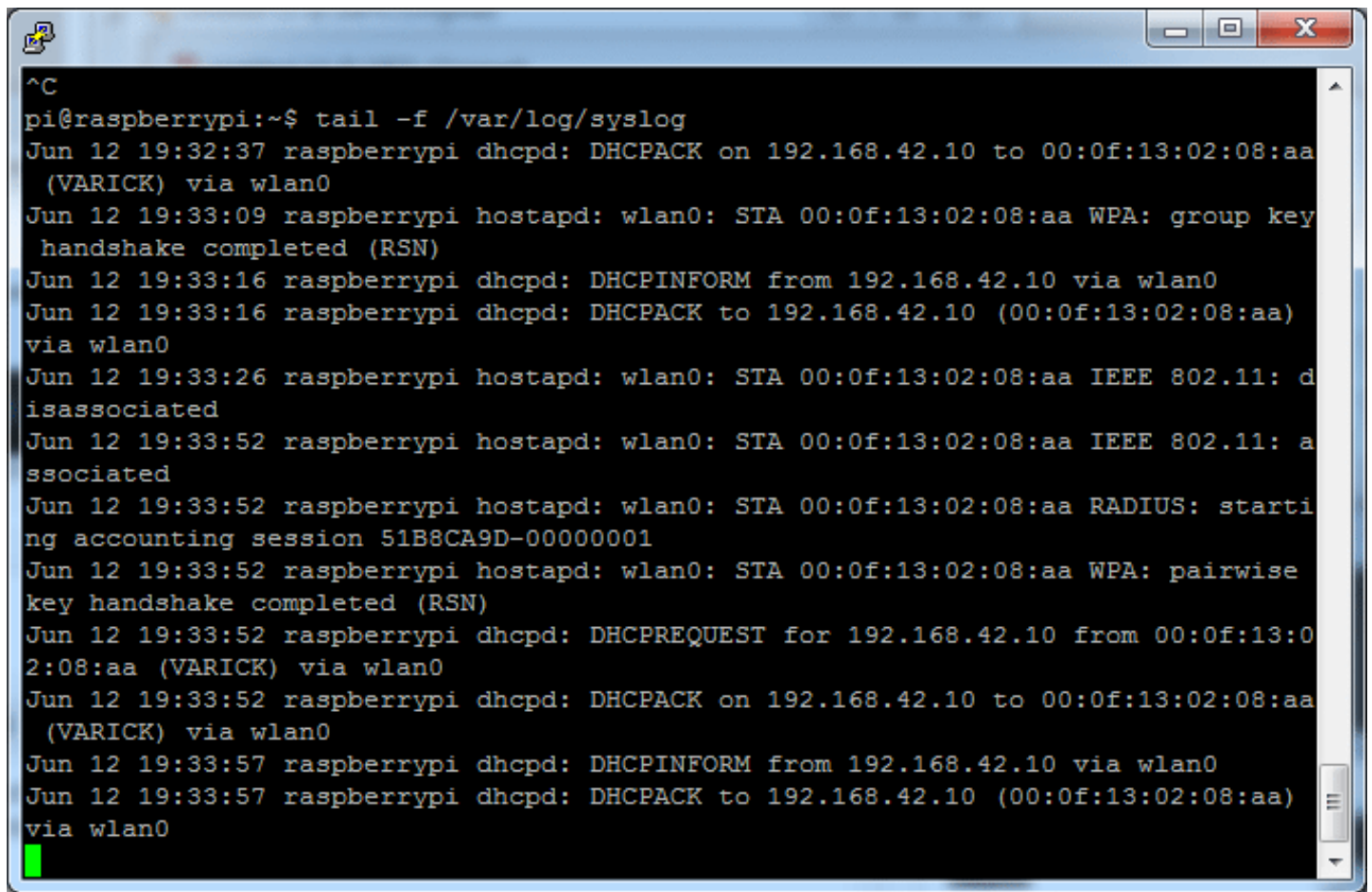Connect with another computer to the AP you made in the previous step

Enter the WPA key you specified in the previous step

In the Pi syslog you should see stuff like this! It indicates that a client connected, at what time and what IP address was given to them

If you can't connect at all, something is wrong with **hostapd**

```
^C
pi@raspberrypi:~$ tail -f /var/log/syslog
Jun 12 19:32:37 raspberrypi dhcpd: DHCPACK on 192.168.42.10 to 00:0f:13:02:08:aa
 (VARICK) via wlan0
Jun 12 19:33:09 raspberrypi hostapd: wlan0: STA 00:0f:13:02:08:aa WPA: group key
 handshake completed (RSN)
Jun 12 19:33:16 raspberrypi dhcpd: DHCPINFORM from 192.168.42.10 via wlan0
Jun 12 19:33:16 raspberrypi dhcpd: DHCPACK to 192.168.42.10 (00:0f:13:02:08:aa)
via wlan0
Jun 12 19:33:26 raspberrypi hostapd: wlan0: STA 00:0f:13:02:08:aa IEEE 802.11: d
isassociated
Jun 12 19:33:52 raspberrypi hostapd: wlan0: STA 00:0f:13:02:08:aa IEEE 802.11: a
ssociated
Jun 12 19:33:52 raspberrypi hostapd: wlan0: STA 00:0f:13:02:08:aa RADIUS: starti
ng accounting session 51B8CA9D-00000001
Jun 12 19:33:52 raspberrypi hostapd: wlan0: STA 00:0f:13:02:08:aa WPA: pairwise
key handshake completed (RSN)
Jun 12 19:33:52 raspberrypi dhcpd: DHCPREQUEST for 192.168.42.10 from 00:0f:13:0
2:08:aa (VARICK) via wlan0
Jun 12 19:33:52 raspberrypi dhcpd: DHCPACK on 192.168.42.10 to 00:0f:13:02:08:aa
 (VARICK) via wlan0
Jun 12 19:33:57 raspberrypi dhcpd: DHCPINFORM from 192.168.42.10 via wlan0
Jun 12 19:33:57 raspberrypi dhcpd: DHCPACK to 192.168.42.10 (00:0f:13:02:08:aa)
via wlan0
```

On your computer, open up a **Terminal** (mac/linux) or **Start->Run->cmd** to open up a command line

First check what **ifconfig** (mac/linux) or **ipconfig** (windows) says. You should have IP address in the 192.168.42.10-50 range

Try pinging the Pi, its address is 192.168.42.1 - on windows it will ping 3 times and quit. On mac/linux press Control-C to quit after a few pings. You should get successful pings as seen below

If that doesn't work, something is wrong with **hostapd** or **dhcpd**(more likely)

Next try pinging 8.8.8.8, if this doesn't work but the previous does, something is wrong with **dhcpd** or the NAT configuration (more likely)

Finally, we'll check that DNS works, try pinging www.mit.edu. If this doesn't work, something is wrong with **dhcpd**

If everything is good so far, try browsing the internet, sending email, etc. You are now using your Pi as a Wifi Router!

More!

Its possible to set up your router for open or WEP access, but we don't cover that here (and it's not as secure!) You might want to search around for tutorials such as this one that cover **hostapd**options