Troubleshooting your IP address

📋 Unknown macro: 'composition-setup'

An **IP address** (Internet Protocol address) is a unique number that devices use in order to identify and communicate with each other on a network utilizing the Internet Protocol standard. For example, your computer has a unique IP address on ResNet. It is obtained during the ResNet Registration Process.

If you're having problems connecting to the internet at Carleton, an easy thing to check is whether or not your machine has an IP address. If it doesn't, it will not be able to use any of the network services (Internet, E-mail, network drives).

Reading your IP Address from connect.carleton.edu

For any on-campus system, IP address and MAC address should appear at the bottom of https://connect.carleton.edu/.

This is usually easier than running OS-specific commands, below.

Finding your IP address

Windows

1. Click on the Start menu.
2. If using Windows XP, click "Run...". Otherwise, go to the next step.
3. Type "cmd" without quotes.
4. In the window that opens, type "ipconfig /all" without quotes. You may see a lot of output similar to that below.

```
C:\Users\kamine>ipconfig /all

Windows IP Configuration

    Host Name . . . . . . . . . . . . : ITSLOAN43798W
    Primary Dns Suffix  . . . . . . . : ads.carleton.edu
    Node Type . . . . . . . . . . . . : Hybrid
    IP Routing Enabled. . . . . . . . : No
    WINS Proxy Enabled. . . . . . . . : No
    DNS Suffix Search List. . . . . . : ads.carleton.edu
                                        carleton.edu

Ethernet adapter Bluetooth Network Connection:

    Media State . . . . . . . . . . . : Media disconnected
    Connection-specific DNS Suffix  . :
    Description . . . . . . . . . . . : Bluetooth Device (Personal Area Network)
    Physical Address. . . . . . . . . : 00-1F-F3-AA-24-3F
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes

Wireless LAN adapter Wireless Network Connection:

    Connection-specific DNS Suffix  . : carleton.edu
    Description . . . . . . . . . . . : Broadcom 802.11n Network Adapter
    Physical Address. . . . . . . . . : 00-1F-5B-CB-B4-DF
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IPv4 Address. . . . . . . . . . . : 137.22.186.149(Preferred)
    Subnet Mask . . . . . . . . . . . : 255.255.255.0
    Lease Obtained. . . . . . . . . . : Tuesday, July 10, 2012 2:41:45 PM
    Lease Expires . . . . . . . . . . : Tuesday, July 10, 2012 3:41:45 PM
    Default Gateway . . . . . . . . . : 137.22.186.254
    DHCP Server . . . . . . . . . . . : 137.22.1.33
    DNS Servers . . . . . . . . . . . : 137.22.1.14
                                        137.22.1.13
                                        137.22.128.2
    NetBIOS over Tcpip. . . . . . . . : Enabled

Ethernet adapter Local Area Connection:

    Connection-specific DNS Suffix  . : carleton.edu
    Description . . . . . . . . . . . : Marvell Yukon 88E8058 PCI-E Gigabit Ether
net Controller
    Physical Address. . . . . . . . . : 00-1F-F3-D1-2F-16
    DHCP Enabled. . . . . . . . . . . : Yes
    Autoconfiguration Enabled . . . . : Yes
    IPv4 Address. . . . . . . . . . . : 137.22.128.85(Preferred)
    Subnet Mask . . . . . . . . . . . : 255.255.224.0
    Lease Obtained. . . . . . . . . . : Tuesday, July 10, 2012 8:19:37 AM
    Lease Expires . . . . . . . . . . : Tuesday, July 10, 2012 5:18:58 PM
    Default Gateway . . . . . . . . . : 137.22.128.254
    DHCP Server . . . . . . . . . . . : 137.22.1.33
    DNS Servers . . . . . . . . . . . : 137.22.128.2
                                        137.22.1.13
                                        137.22.1.14
    NetBIOS over Tcpip. . . . . . . . : Enabled
```

You are looking for one of the options outlined in red based on the type of connection you are using ("Wireless" or "Ethernet"). Your IP address is on the line labelled "IPv4 Address", outlined in green.

Mac

1. Press cmd + space or click on the Spotlight magnifying glass in the upper right and search for "Network Utility".
2. In the window that opens, look under "Interface Information" for "IP Address", as shown below.
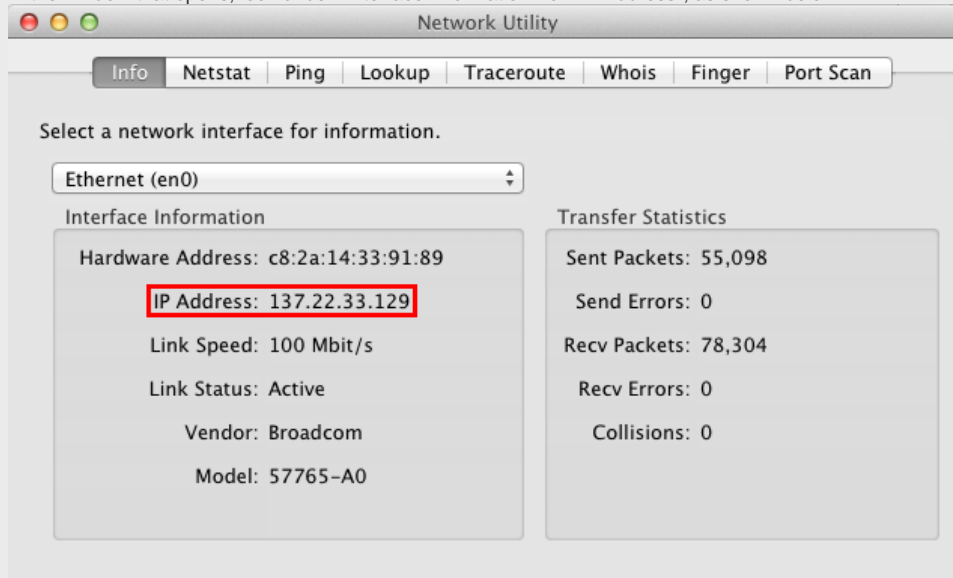
The number listed is your IP address. Note that you may have to change the drop down selection to reflect your type of connection ("Ethernet" or "Wi-Fi").

Using your IP address to diagnose a connection issue

Your IP address should give a good idea of what's going on with your computer. Firstly, determine whether your IP address starts with 137, 10, 192, 169 or 0.

- **137:** you are connected to the network. If you cannot connect to either e-mail or the web and you're on a PC, check your settings in Internet Options and in the Network Connections control panel. Turn off proxies, turn off firewalls. In Windows Service Pack 2 firewalls are a common problem. In the Network Connections control panel, in the TCP/IP properties of Local Area Connections properties, make sure your computer is set to have an IP Address configured automatically via DHCP.

- **10.22:** your computer can see the internet and but you are not yet registered. Go to the registration page. This page may take up to a full minute to load. If it loads, follow the instructions on the page. If it fails to load, check the settings in Network Connections and Internet Options. Turn off proxies in Internet Options and firewalls in Network Connections Properties. In Windows Service Pack 2 firewalls are a common problem.

- **192:** you are either not seeing the DHCP server or you have been booted off the network for a DMCA violation, high bandwith use, or a virus. One common cause of this is that your computer is set to manually obtain an IP address rather than automatically (this is often the case for students who were recently off-campus or studying abroad).
  To change this in **Windows XP**, go to Control Panel > Network Connections > Local Area Connection > Properties, select TCP/IP connection and go to Properties. The options in this window should be set to "Obtain an IP address automatically" and "Obtain DNS server address automatically" respectively.
  To change this in **Windows Vista**, go to Control Panel > Network and Sharing Center > Manage network connections, double click your Local Area Connection, go to Properties, select Internet Protocol Version 4 and go to its Properties, and you will then see the choices to obtain IP address automatically or set it manually.
  If you are set to obtain an IP Address automatically and still unable to connect, contact the ITS helpdesk at x5999.

- **169** means you cannot connect to the network. A simple restart sometimes solves this problem. Are you getting link lights? Link lights, the small lights on your ethernet card, when lit, mean that there is a link between your computer and the network. Some cards combine the link light and the traffic light: if everything is working, the light will be solidly lit most of the time, but will blink when it sees traffic on the network. If there are no link lights, there may be a problem with the Ethernet card. Is it a port problem? If it is not, check the network adapters in the Device Manager in the Hardware tab of the computer's properties. Malware is also known to hamper internet connectivity: be sure no viruses or spyware are ruining computer settings.

- **0.0.0.0:** Media Disconnected, or your computer cannot establish a link to the network. A restart very often solves this problem. If it does not, make sure the media is not disconnected, or try a new port. Many ethernet ports at Carleton, particularly in the library, are not active.
- **144.3.8.0** Media Disconnected.. at least I think. This appears to be Macintosh specific.

General troubleshooting: Are you getting link lights? Link lights, the small lights on your ethernet card, when lit, mean that there is a link between your computer and the network. Some cards combine the link light and the traffic light: if everything is working, the light will be solidly lit most of the time, but will blink when it sees traffic on the network. If there are no link lights, there may be a problem with the ethernet card. Check the network adapters in the Device Manager (Device Manager can be found under the Hardware tab when you right click My Computer and select Properties) - look for yellow exclamation points or question marks that point to hardware problems. Do new drivers need to be installed? Is the hardware lodged firmly into the computer? Malware is also known to hamper internet connectivity: be sure no viruses or spyware are ruining computer settings. Is it a port problem?

Resetting the TCP/IP Stack (outdated, Windows only)

For 169 and 0 IP addresses, you can try resetting the TCP/IP stack:

1. Do so by opening a command prompt (Start>Run>"cmd")
2. Type the following command (sans quotes): "netsh int ip reset resetlog.txt" .
3. If that command doesn't work, another command that is supposed to work under Windows Service Pack 2 is: "netsh reset winsock catalog" .

External Links

Registration Page

For more information on IP addresses, try wikipedia: IP Address