

# Connecting to the Indiana Tech Wired Network

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## Step 1: Setting up your computer

Set up your computer as normal and follow all safety guidelines provided by your computer's manufacturer.

## Step 2: Verifying the network interface card (NIC) recognition (Windows 95/98/2000/XP)

1. Click *Start*, choose settings, and click on *Control Panel*.
2. Double-click on *System* in the Control Panel menu.
3. Click on the *Hardware* tab.
4. Choose *Device Manager*.

Locate the Network Adapter section. If your NIC is listed, it is recognized by Windows. If it is not recognized, follow the instructions that came with your network interface card or visit the manufacturer's Web site. Another reason that it doesn't show up may be because a network interface card is not installed. (You can purchase a network interface card at any store that sells computer hardware).

## Step 3: Configure Protocols

### Installing the TCP/IP Protocol (Windows 2000/XP only)

1. Click *Start* and then *Control Panel*.
2. Select *Settings* and then click *Network Connections* settings (this may also be shown as *Network and Dial-up*).
3. Within the *Network Connections* settings, double-click the *Local Area Connection* icon.
4. Click the *Properties* button.
5. If Internet Protocol is NOT listed, click *Install*. If it is displayed, it is set up correctly.
6. Under *Network Component Type*, select *Protocol* and click *Add*.
7. Under *Network Protocol*, select *Internet Protocol* and click *OK*.

The installation will now begin. If prompted, do NOT restart.

### Configuring the TCP/IP Protocol (Windows 2000/XP only)

1. Click *Start*.
2. Select *Settings* and then click *Network Connections* settings (this may also be shown as *Network and Dial-up*).
3. Within the *Network Connections* settings, double-click the *Local Area Connection* icon.
4. Click the *Properties* button.
5. Under *Components*, select *Internet Protocol*.
6. Click *Properties*.
7. Select the option: *Obtain an IP Address Automatically*.
8. Select the option: *Obtain DNS server address automatically*.

You are done configuring TCP/IP. Click *OK*. Click *Yes* when prompted to restart your computer. You should now be ready to connect to the network. **Proceed to Step 4.**

## Installing the TCP/IP Protocol (Windows 95/98 only)

1. Open *My Computer*.
2. Open the *Control Panel*.
3. Open *Network*.
4. Under the *Configuration* tab, the following protocols should appear:
  - i. Client for Microsoft Networks
  - ii. Your Ethernet Card Adapter
  - iii. TCP/IP
5. If the above settings are NOT shown, you must install them by clicking *Add*.
6. Click on *Protocols* and then click *Add*.
7. In the box on the left-hand side, scroll down until you get to Microsoft. Click *Microsoft*.
8. Click on the protocol you wish to install in the right-hand box.
9. Click *OK*.

## Installing the TCP/IP Protocol (Windows 95/98 only)

1. Select *TCP/IP* and click *Properties*. You will get a window labeled *TCP/IP Properties*.
2. Under *Primary Network Logon*, *Client for Microsoft Networks* should appear. If it doesn't, you should select it by using the arrow tab on the right and clicking it when it appears in the box.
3. Click *File* and *Printer Sharing*. Uncheck the boxes.
4. If you wish to enable these features in the future, you can do so. These should only be used if you wish to share your printer and/or files with other people on your subnet. Be careful when using this option as it leaves your computer vulnerable to attacks from other computers that are on the network.
5. Under the *Identification* tab, your computer must be named with your first initial and last name (i.e. John Smith – jsmith). Make sure your computer name is no longer than eight characters (sometimes the connection will not work if it is longer). You can also enter a workgroup (i.e. Room 101 if you are in Room 101) or set up a workgroup amongst your friends.
6. Click on the *TCP/IP* and then click *Properties*.
7. In the *Address* tab, make sure *Obtain an IP* address is selected.
8. In the *DNS Configuration* tab, make sure *Enable DNS* is selected.
  - i. The host name is the same as the name you gave your computer (i.e. jsmith) in the *Identification* tab.
  - ii. Make certain there are no additional entries in either of these boxes. If there are, select the entry and click *Remove*.
9. In the *WINS Configuration* tab, make sure that *Disable WINS Resolution* is selected.
10. Click *OK*
11. You should now be asked if you want to reboot your system so that the changes you made will be effective. Reboot. Your network settings should be in place once your computer has restarted.
12. Under *My Computer*, *Control Panel*, *Internet*, uncheck all options for Windows 95 users. Your computer may have been previously set up to connect using a dial-up adapter with your modem. Following this step will ensure that your network settings will be used instead. You can check the use *LAN Connection* in Windows 98.

You should now be ready to connect to the network. **Proceed to Step 4.**

## Step 4: Configure Protocols

Plug the network cable into your NIC (located in the back of your computer). Plug the other end into the data port on the wall. Check to make sure the link light is on (where you plugged the cable into your computer).

## Step 5: Verifying Your Connection

Plug the network cable into your NIC (located in the back of your computer). Plug the other end into the data port on the wall. Check to make sure the link light is on (where you plugged the cable into your computer).

1. Restart your computer.
2. Open an Internet Browser (Internet Explorer, Firefox, etc.). A successful connection to a Web site confirms that your computer is configured properly. You can test this by going to any Web site.
3. Alternately, click *Start, Run* and type *cmd* in the *Open* dialog box that appears. Type *ipconfig/all* at the prompt and click *Enter*.
4. If you receive a valid IP address (i.e. 10.20.###.###), your computer has been configured properly.
5. If your IP address shows up '0.0.0.0', the configuration was not set up properly and you'll need to repeat Step 3.

## Step 6: Troubleshooting

After completing Steps 1-5, the most common reasons for an unsuccessful connection may be one or more of the following:

- Make sure that the same network cable that is connected to your computer is the same cable that is plugged into the Ethernet jack in the wall.
- Check to make sure the link light (where you plugged the network cable into your computer) is on. If it is off then it is likely a hardware problem (with your NIC). If the link light is on, then it is probably a software problem (try re-installing the installation software that came with your NIC).

### Link Light ON:

- The network service may be down. If your neighbors aren't unable to connect either, this is the most likely cause.
- Go over the TCP/IP settings again. Make sure that you closely followed them as well as the directions for your operating system.
- If you receive an invalid IP address, type *ipconfig /release* and then *ipconfig /renew*. (See Step 5.3 for instructions)

### Link Light OFF:

Possible causes could be:

- Bad faceplate
- Bad NIC
- Bad network cable
- The network cable is not plugged into an active data port. Try first plugging into a data port known to be active (your roommates). You may have inadvertently plugged into either a telephone jack (The data port is BLUE) or an inactive data port.
- If you suspect the faceplate is bad: Connect to a friend's connection that you know is working with your NIC and network cable. If you can connect then in all probability it is your faceplate.
- If you suspect that your NIC is bad: Can your roommate connect using your network cable? If so it is the faceplate or NIC. If your friend can connect to your faceplate with his computer and your network cable then it is likely a problem with your NIC.
- If you suspect that your network cable is bad: Ask a friend, whose connection you know is working, to use your cable. If it fails, it's your cable. You may be using a telephone cord and not the RJ-45 Ethernet cable (network cable) that is required - you'll need to purchase one, available at the Business office or at any store that carries

computer hardware supplies. Compare to a friend's cable first to confirm. Alternatively, try using your friend's network cable on your system (be sure you plug into a known active data port).

If you still cannot get your computer connected to the network, use another computer (there are publicly available machines in the labs as well as the library) to go to <http://www.indianatech.edu/ITS> to submit a ST@T Helpdesk ticket, or call the ST@T helpline at **423-6426, ext.1261**.