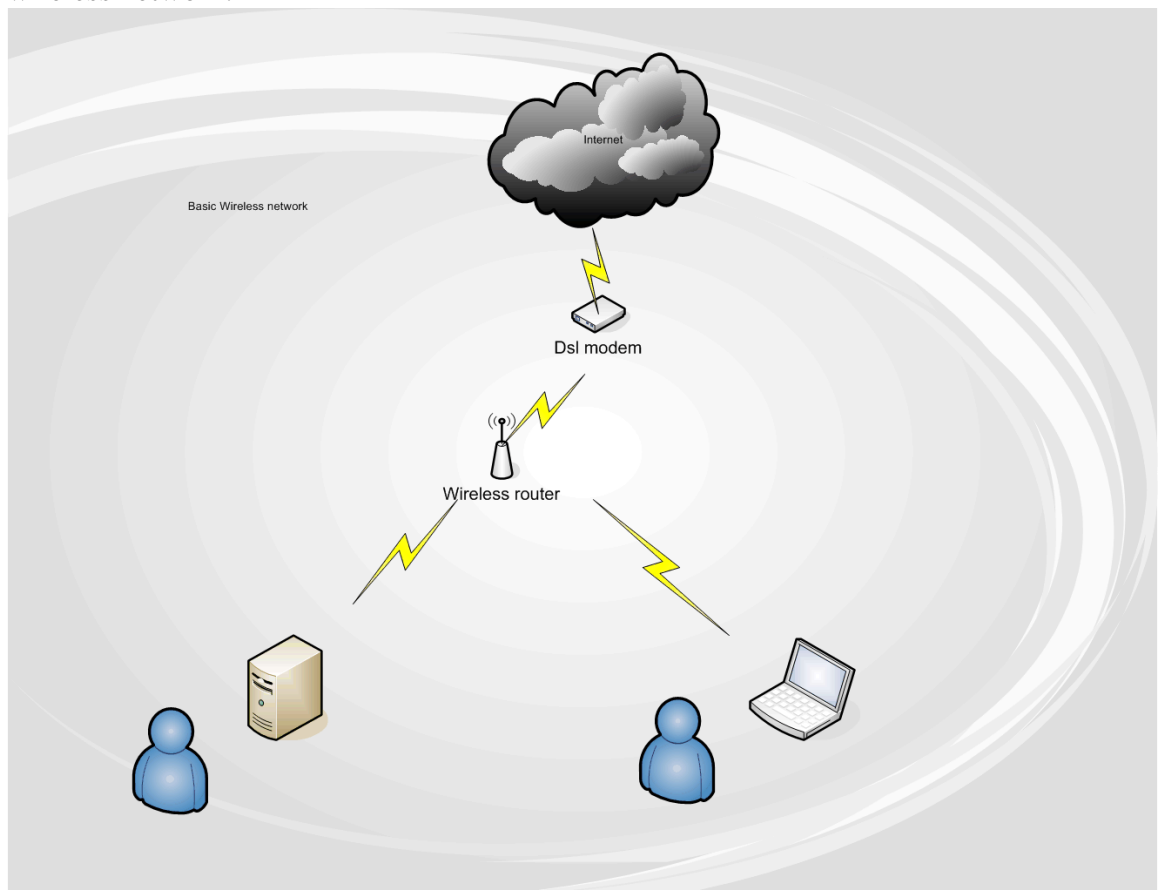


Wireless Basics

Here are 4 simple steps in creating a wireless network:

1. **Choose your wireless equipment.** Stick with known manufactures such as Linksys, Netgear, Dlink when buying equipment. These companies are leaders in the home networking arena and provide good support for their products. You will need to buy a wireless router and/or a wireless network card. This network card can be a PCI (for desktops), PCMCIA (for laptops), or USB (works with either). . Most new laptops come with some form of wireless technology. When buying these items, stick with the newer technology which is 802.11G. This will provide you with the fastest speeds available today.
2. **Connect your wireless router.** Now you will need to connect the router to your modem (DSL or cable). Most wireless routers come with at least a 4 port switch so you can add additional machines via Ethernet cables. This switch will also be needed in the initial setup of the router. Here is an example diagram of a basic wireless network:



3. **Configure your wireless router.** Using an Ethernet cable, you will want to plug it into one of the switched ports on the router. Then power on the router as well as your machine. Once you are logged into your PC, open up a browser. Most of the time, you will type the following into the url window: <http://192.168.1.1> and login using the admin user name and password. You can consult your documentation for the details. Most of the time you will need to configure the following items:
 - a. **WAN address and Gateway:** You should be able to choose DHCP for this option to avoid having to manually setup these items.
 - b. **DHCP server and IP range:** You will want to setup the DHCP service for you LAN connection. This will provide you machines with address to attach to the Internet.
 - c. **Wireless network name (SSID):** You will want to change this from the default name. This name identifies your network and you will want to give it a non descriptive name as a security measure.
 - d. **Turn on WPA/WEP Encryption:** These encryption methods will scramble your data as it sent over the wireless network. WPA is the most basic form of encryption you can choose. If you have the choice, choose WEP with a passphrase that is unique and long for more security.
 - e. **Enable MAC address filtering:** Each piece of wireless equipment has a unique identifier called a “physical address” or “MAC address.” You can find this address out by opening a command line and typing “ipconfig /all and looking at the physical address line. Enable this option as an additional security measure.
 - f. **Change the default administrator password:** Always change this password! Choose a key phrase that uses numbers and symbols (The Red f0x chased the blu@ f0x) to make your password easy to remember but not easy to guess.

4. **Connect your computers:** Install your wireless card and software. You will usually connect through the vendors software but you can also connect using XP with SP2 by doing the following:
 - a. Right click the wireless network icon in the lower-right corner and then click “View available wireless networks.”
 - b. The wireless network connection window should appear and you should see your wireless network listed with the network name (SSID) you chose. Click on your network name and then click connect in the lower-right corner.