

# THE INTERNET

So what is the Internet? It's just a bunch of computers (including yours) hooked together, running a pile of different programs across the connections. The programs are generally of two kinds, server and client. Servers host programs that clients use. Most users only have clients running on their PCs.

Every machine on the internet (including yours) has an IP address in dotted quad format, i.e. four sets of numbers not exceeding 255 separated by periods. Some servers have domain names, real world names that we can use to describe the machine instead of memorizing its IP address. Domain Name Servers (DNS) keep track of all the domain names for the whole internet to use.

For example, your computer has no idea "where" on the internet [www.intrex.ca](http://www.intrex.ca) is, so the first thing it does is goes and asks the DNS for the IP address. The DNS spits back the IP to your machine, and then your machine goes to that IP via routers and asks for permission to talk to the server. To make matters more complicated, your client software makes these requests on the correct port number. To "talk" to [www.intrex.ca](http://www.intrex.ca), your PC must use a client configured to use port 80, which is the standard browsing port used on the internet. Fortunately, Internet Explorer, Netscape and Firefox are all configured to use port 80 for talking to web servers.

If you used your mail program to talk to [www.intrex.ca](http://www.intrex.ca), you would get rejected or "bounced". If you used your browser to connect to a P2P server, you would get bounced. Client software has to talk to the servers on the correct port to get access to whatever it is the server is offering.

So what kind of clients and servers are out there? We've discussed browsing and e-mail, but there are many more:

FTP (file transfer protocol) is frequently used for transferring files to and from an FTP server.

P2P (peer to peer) comes in many flavours and clients, but is all pretty much the same thing, a way to transfer files from one client to another. The servers organize clients together for file searching.

NNTP is used for newsgroups. Newsgroups are a variation of email in which one can see all the posts made by everyone subscribed to the newsgroup. It is similar to a bulletin board, but not as graphical, and not web-based. Newsgroups are increasingly being used for file transfer, though most of the newsgroup servers out there are vintage units.

Messaging clients usually have some kind of little popup interface that allows you to chat directly to other people. The server is still required for keeping track of where everybody is, so remember, Bill Gates knows what you have said.

Streaming clients allow audio or video content to come from a server to the client. Good examples include radio stations. For example, the Warriors' internet broadcast requires a special client plugin to be installed.

On the dark side, you can mistakenly install server programs on your PC that give access to your machine from the outside.... Remember, it's a two way street.

If you have question or comments, I can always be reached via email [sean@intrex.ca](mailto:sean@intrex.ca) or join our forums at <http://intrex.ca> for more in-depth conversations.