Static is steady when opting for an IP address from your Internet Service Provider

Not all Internet Service Providers (ISPs) are the same – and the difference lies in more than the type of wire used to get your machines connected. One of the most important strategic factors a business should be considering when signing up for a service is the type of IP address the ISP can provide.

In order for one computer to be able to find another computer, it needs to know where it 'lives' on the Internet. Therefore, every computer on an Internet connection gets assigned an address, often compared to a telephone number (only much more confusing). It's called an IP address, and 'IP' stands for 'Internet Protocol'. Sometimes, the IP address changes every so often when the ISP software thinks it's necessary – say, on every occasion the connection refreshes itself. Other times the address sticks around for a while, a *long* while, even forever. Thus we have two different kinds of address systems ISPs could be running on: Static IPs and Dynamic IPs.

The many non-technical creatures out there must now feel confused and befuddled. Why would there be two ways of assigning an address? And why would I ever want my address to change? Or does it matter? Well, there are reasons.

Dynamic IPs were purposely created to switch off and change 'homes' so that when a person using the Internet is finished, the IP address can be given to someone else to use. This way, there can be more users than available IP addresses yet everyone will be able to communicate on the Internet, based on the assumption that not everyone is online at the same time.

Dynamic IPs are also a form of hack-proofing, so that someone who wants invalid access to your computer will have a much more difficult time finding it if the address is constantly changing. But then again, there are always firewalls, routers and other protective software out there that can guard you against such vicious attacks.

For most businesses, being findable is most important, and having a static IP is just one of those company assets you've got to have. When running your own server, you can expect that many people are going to want to connect to your data at various times and, most importantly, in various places. Having employees constantly working in remote locations or at geographically distant offices might need access to the company's information systems, which in turn require a static IP. Formerly, the Wireless Access Network (WAN) was a technique mostly used to this effect – until people realized how expensive it was getting to maintain one. Then came the Virtual Private Network (VPN), a sharing system that operates much like a WAN except it rides along the already existing Internet to communicate, as opposed to personal wires a WAN would need to build or lease. So, since many are now using the Internet to do the job, having a static IP is increasingly in demand.

VoIP companies, anyone running their own Web server, File Transfer Protocol (FTP) software, personalized e-mail service and even online gamers who want ultimate control and identification when playing online need to have static IPs. Not only that, when keeping server downtime to a minimum, it wouldn't be a bad idea to have a static IP that won't pause every time it needs to refresh itself.

Here comes the *really* confusing part: some static IPs are 'fake', while others are 'real'.

Why? Well, because sometimes it's a cheaper alternative to get a 'fake' static IP. The only problem is that if you ever turn the server off, or if by any chance the power goes out, the IP address thinks its duty is done where it was and moves on to another assignment. So in cases where this could pose a problem to the clients who need to access your database, VoIP, FTP and so on, be sure your ISP is offering you a real, hard-coded static IP, and not one based on what is called "DHCP assignment." With the big players, the price for a 'real' static IP is a hefty one, but you can shop around for package deals that include the real thing.