It's all Geek to Me!!

What the heck is a Firewall?

A while ago I received an e-mail from a reader asking about Firewalls. At the time there were many things happening and I never got to respond. If you are looking to protect your computer from all the different types of attacks, I have suggested in the past that you take a 3-step approach.

Step 1 – Use a good Antivirus program and keep it up to date.
Step 2 – Run Windows Update on a regular basis and install all Critical and Driver updates.
Step 3 – Use a Firewall

A firewall can be software on your PC or hardware between you and the internet. Its function is to block incoming or outgoing traffic based on a set of rules. By blocking traffic, you are blocking the means of communication to your PC. This communication uses what is called a port.

A port is like a channel on your TV, if you want to see a show you tune your TV to a particular channel and watch it. Communication to/from your PC is similar. If you want to surf the net you use a particular channel or port (port 80 to be specific), while other types of communication use other ports (for example AOL Instant Messenger uses port 5190).

By utilizing a Firewall, I can let someone surf the net but block AOL Instant Messenger if I want. Aside from exciting cocktail party information and driving my kids crazy, what does this do for you? It allows you to limit the type of traffic that comes to or from your computers, which limits the types of attacks that can be done to computers on the network.

When you connect to the Internet, you are given a unique address by your Internet Service Provider (AOL, Verizon, Comcast, MSN, etc.). This address is used to uniquely identify you while you are connected to the Internet. Any and all traffic to/from your computer uses this address. If you share a connection, each computer needs a unique address but your ISP only gives you one. In order to do this you would buy a Router which would use the single address for itself and give PCs on the network a private address locally. A Router typically comes with a NAT or SPI Firewall or both.

The NAT (or Network Address Translation) Firewall is a very basic type of protection that takes your single unique address and uses it for external communication to the Internet but gives your PC a different private one. This makes it a bit more difficult to target a PC as the actual PC address is not visible on the Public Internet.

The SPI (or Stateful Packet Inspection) Firewall examines the traffic coming to your network, determines the type of traffic it is and handles it based on the rules that are set up. The rules can be used to forward traffic on a specific port to one computer while sending traffic on another port to a different one or block it completely. So when my son decides that he wants to be up at all hours of the night Instant Messaging with his friends, I can enable a rule to block Instant Messaging to his computer and cut him off.

If you use dial-up services or only use a single computer with your Broadband you can use a software firewall. If you purchase Norton Internet Security it includes a software firewall along with Antivirus and other tools to protect your computer. It provides great protection. McAfee has the Internet Security Suite that provides similar functions to the Norton package.

If you are searching for just a firewall, you can download Zonealarm or Sygate Personal Firewall. Both have free versions that get good marks for protection, if you want more they also have versions you can buy with additional features and functionality.

If you are buying a Router for a small network, I typically use NetGear for my small networks and buy them with NAT & SPI Firewalls. They are easy to install, provide solid service and have several features that help make life easier.

If you have any questions about computers, please feel free to send them to me at Contact@cbtechserv.com and I will respond in a future column.

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