

# Network Notables

*Net Solutions Technology Center, LLC (843) 525 - 6469*

## Special Interest Articles:

- **Local Businesses Embrace Wireless Networking**
- **Is Wireless Right for You?**
- **Hurricane Preparedness for Technology**
- **Securing Your PC's and Network**
- **Hot Tips**

## Individual Highlights:

- Getting Started with Wireless** 2
- Hurricane Preparedness Tips** 2
- Firewall Security** 3
- Running Defragmenter Utility** 4

## Beaufort Businesses Go Wireless!

Wireless Local Area Networks (WLANs) are the fastest growing network technology in the country, and many area businesses and home offices are following the trend! Local businesses are seeing the benefits of wireless in reduced costs and greater flexibility.

Wireless is a great solution, especially for businesses and home offices in our historic downtown area, because it eliminates running cables through walls, ceilings and across floors. Wireless LANs use radio waves to form a network, minimizing the need for wired connections. Additionally, WLANs allow a user with a laptop the freedom to roam about the office, home, or in some cases, their front or backyard and still maintain access to the Internet and the rest of the network.

Celadon, developer of a new traditional neighborhood on Lady's Island, recently installed a small wireless network in their downtown office on West Street. According to Dennis Green, Celadon Owner and Developer, wireless was a perfect fit.

"We were moving into a small, historical space and didn't want to damage the structure by running wires. We also didn't want unsightly cables strung around the

walls," says Green. "With wireless, we established a clean, professional network without compromising functionality. The network performs great, and if we ever move, we can take our network with us with no loss to our infrastructure investment," Green added.

As industry standards have emerged for wireless technology, many of the concerns about wireless have been addressed. Typical data throughput rates for WLANs rival and in some cases exceed those of traditional wired networks. While radio interference can cause some degradation in performance of WLANs, such interference is rare in the workplace. And because wireless technology has roots in military applications, security has long been a design criterion for wireless devices. Security provisions are typically built into wireless LANs. Once properly installed and configured, it is extremely difficult for eavesdroppers to listen in on wireless LAN traffic. Complex encryption techniques make it impossible for all but the most sophisticated to gain unauthorized access to your network traffic.

In addition to new networks, wireless LAN segments can be set up to accommodate additions to existing wired networks without installing or

moving wires. The Greater Beaufort Chamber of Commerce recently extended their traditional network to include two wireless computers. Wayne Kachelriess, Finance and Operations Director for the Chamber, explained their decision to include wireless.

"The Chamber went through a major rewiring effort for our building on Carteret Street last fall. Due to the age and architecture of the building, it was very labor intensive and quite expensive. We are a growing organization," Kachelriess continued. "And as we grow, we need to be able to add and relocate workstations without continually having to rewire. Using wireless for these two computers allowed us to locate them wherever we wanted; getting them installed quickly and cost effectively. We haven't noticed any difference in the performance of these two computers versus others on the wired network," added Kachelriess.

Industry standards for wireless technology have led to new vendors and a dramatic drop in wireless equipment costs. Wireless is now an affordable solution for many businesses and home users.

For more information on wireless networking contact Net Solutions Technology Center at (843) 525-6469.

## Is Wireless Right for You?

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*“Is Wireless the right choice for your home or business?”*

Is wireless the right choice for your home or business? Wireless might be right for you if:

- You're moving into a space that's not wired for computers .
- You're restricted from making holes in the walls or ceilings.
- You anticipate being in your current location only a short time.
- You need to rearrange your office but the computer jacks are in the wrong place.
- You need to add computers or bring a laptop into a conference room but have no available data jacks.
- Cables are strung across your home or office so people can share data and printers.

### Getting Started

To set up a wireless network you will need some basic equipment.

A transmitter/receiver device, called an access point, connects to one physical wired connection, or the hub of an existing network, using a standard data cable. The access point receives, buffers, and transmits data between the WLAN workstations and/or the wired network devices .

A single access point supporting a small group of users can function within a range of one hundred to several hundred feet, depending upon the building structure. The access point (or the antenna attached to the access point) is usually mounted high but may be mounted anywhere that is practical as long as the desired radio coverage is obtained. Additional access

points and bridges can be used to extend the coverage area as needed throughout a building.

Users will need a wireless PCI adapter inserted in their desktop computer, or a wireless PC card inserted in their laptop computer to access the WLAN. There are also USB versions of these adapters, which plug externally into the workstation. Wireless print servers are also available to attach printers to your wireless network.

Wireless access points range from \$100 -\$1,500 depending upon features. Wireless network cards start at approximately \$100 each. For optimal performance, insure proper installation and configuration of all wireless equipment.

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## Hurricane Preparedness for Your Technology

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*“In the event of a hurricane, do you know how to safeguard these valuable resources?”*

Hurricane Season is now at its peak! Does your hurricane preparedness plan for your home and business, cover your computers and your network? In the event of a hurricane, do you know how to safeguard these valuable resources?

Net Solutions Technology Center recommends your plans include the following precautions:

- Have current, up-to-date Flood Insurance in force. Check it annually prior to Hurricane Season.
- Designate a focal point for technology preparation and review procedures annually with

your employees prior to Hurricane Season.

- Insure all important data is stored to the server and run a successful tape backup of your server. Distribute diskettes for backing up any data stored on individual machines. Make sure to take the tapes and diskette backups offsite.
- Properly shut down each machine and the server. Power off the machines .
- Unplug all electronic equipment from wall sockets and all cables from wall jacks.

- Put system units and all equipment up off the floor.

- Cover workstation components with sheets of plastic or large trash bags.

- In the event of an evacuation, be sure to take the backups and if possible, take the server or system unit with you.

Upon your return and the safe restoration of power, plug in your equipment and start your PCs and network. Should you experience any problems, call Net Solutions Technology Center at 525 - 6469 for assistance.

# Firewalls: Securing Your Network

The Internet has made large amounts of information available to users at home, in business and in education. Yet connecting your PC or network to the Internet poses a security risk. The Internet exposes your critical or confidential data to malicious attack from anywhere in the world. If you connect your computers to the Internet you must be aware of the dangers, their implications and how to protect your data and your critical systems.

Home users and companies need a security plan. One component of a security plan is a Firewall.

## What's firewall?

A firewall is either a hardware device or a software program that defends computers and connected networks against malicious intruders (hackers) from the Internet who could plant viruses, get access to personal data on your system, get hold of your login's and passwords, and/or place data on your system that could compromise you.

The firewall must have at least two interfaces, one for the network it is intended to protect, and one for the network it is exposed to, usually the Internet. A firewall sits at the junction point (gateway) between the two networks.

Hardware firewalls are either a separate piece of equipment or integrated into another networking device called a router. Routers are often used to connect your network to your high speed Internet access. Software firewalls are usually loaded on a computer that is

connected to the Internet or that serves as a gateway for other computers to access the Internet. Firewall software is less expensive than hardware; with some versions being available free of charge.

## I have a router; do I have a firewall?

It depends. Routers may or may not have a built-in firewall depending upon the quality of the router. When implementing a solution, such as DSL or Cable Internet access that requires a router, you should always question the vendor about the extent of firewall capabilities built into the router.

## How does a firewall work?

A firewall examines all traffic passing between the two networks to see if it meets certain criteria. If it does, it is routed between the networks, otherwise it is stopped. A firewall filters both incoming and outgoing traffic. It can be used to log all attempts to enter the private network and trigger alarms when hostile or unauthorized entry is attempted.

## What can't a firewall do?

A firewall cannot prevent individual users with modems from dialing into or out of the network, bypassing the firewall altogether. Employee misconduct or carelessness cannot be controlled by firewalls. Policies involving the use and misuse of passwords and user accounts must be strictly enforced. These are management issues that should be raised during the planning of any security policy but that cannot be solved with firewalls alone. That is why security plans are so important.

## Is a firewall sufficient to secure my network or do I need anything else?

The firewall is an integral part of any security program, but it is not

a security program in and of itself. A firewall is considered a first line of defense in protecting private information. For greater security, things like data encryption are available. Your security program will involve other components depending upon your specific security needs. That's why it is necessary for an organization to have a well planned and strictly implemented security program.

## Who needs a firewall?

Any business or home office that has a computer network that is connected to the Internet needs firewall protection. Furthermore, anyone who connects so much as a single computer to the Internet via modem should have personal firewall software.

## Firewall-related Problems

Information security involves constraints, and we users don't like this. Firewalls restrict access to certain services. Firewalls can also create a traffic bottleneck. They concentrate security in one spot, aggravating the single point of failure phenomenon. The alternatives however are either no Internet access, or no security, neither of which are acceptable in most organizations.

## Common Sense...

Firewalls and other defenses are there to "help" protect your system. It is never possible to secure any computer or network 100%! You have to do your best and most the time that will be enough.

For more information on Firewalls and securing your network contact Net Solutions Technology Center at 525 – 6469.

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We're on the Web!  
See us at:  
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## HOT TIP: Defrag to Optimize Your PC's Performance

One of the more important things you can do to keep your system running at peak performance is to regularly defragment your computer.

During normal usage, files are regularly being read from and written to your hard drive, often in small chunks. As a result, pieces of files end up getting scattered around your hard drive, compromising your computer's performance.

For Windows 95/98/2000/XP, you can run a utility program called "Disk Defragmenter," to resolve this problem. Disk Defragmenter finds the scattered pieces of files and reorganizes them into contiguous chunks on your hard disk, making them run more efficiently. It also moves files that you use most often to the beginning of the drive where they'll load faster.

### To use the Disk Defragmenter tool:

- Click the **Start** button; point to **Programs**; point to **Accessories**; point to **System Tools**; and then click **Disk Defragmenter**.
- Click the drive you want to defragment, the C drive, then click the button labeled **Defragment** or **Defragment Now...**

### Can I use my PC while defragmenting?

Defragmenting can interfere with normal PC operation. Defragmentation can also take several hours to complete. We recommend running defragmenter when your computer will not be in use. We also recommend

temporarily disabling your screen saver and any background programs, such as antivirus scanning software, that may be running at the same time. Visit our website at [www.easierway.com](http://www.easierway.com) for more details.

### How often should I run Defragmenter?

If most of your computer work is word processing, you'll need to defragment about four times a year. You should defragment your hard drive more often if you work with large accounting files, imaging files, complicated spreadsheets; or use programs that create several temporary files, like Web browsers, scanning software, music programs, etc.

## About Net Solutions Technology Center, LLC...

Net Solutions Technology Center has been providing the Lowcountry with the finest in technology solutions since 1995.

Whether you need a single PC or a network that can reach around your

organization or around the world, Net Solutions is a full service technology company dedicated to providing our clients the very best technical expertise and individualized service.

Our team of consultants, system designers and

service technicians are nationally certified "A+" for DOS/Microsoft Windows and include Microsoft Certified Systems Engineers and Cisco Certified Network Administrators. These credentials mean the highest level of consulting, services and support available.

### Our Newsletter...

To receive our newsletter online and to provide feedback or ideas for future issues, please email us at [info@easierway.com](mailto:info@easierway.com) or contact us at (843) 525-6469.

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