Web Mountain Technologies

Local Area Networks in a Residential or Small Business Environment

A Tutorial Offered by Web Mountain Technologies
For Residential and Small Business Computer Users
Introduction

Personal computers have become as common in residential and small business environments as refrigerators, garage door openers, or microwave ovens. They can be used for managing personal finances, keeping business records, playing games or for "surfing" the Internet. These devices are no longer novelties, but have become a useful and comfortable everyday tool.

As computers have become more prevalent in the home and in small businesses, it is fairly common to find multiple computers in the same location. Mom and Dad will have a computer in their study and a computer can often be found in the children's room. In a small office environment, most of the workers will have their own computer. With multiple computers often comes a tremendous duplication of resources, i.e., each computer will have it's own printer. More printers mean more problems - repairs, maintenance, supplies, etc.

Local Area Networks

Larger corporations have faced the issues of multiple computers for years. Data processing managers, in order to lower costs and improve efficiency, have implemented what are known as local area networks (LAN). Local area networks allow multiple computer users to share peripherals, such as printers, transfer files among users, and provide for file storage and backup. The growth of telecommuting, home-based business and small business creates the need to employ LANs for most of the same reasons. It is now much easier to transfer files, share common printers, and backup files by using a network.

The common perception is that local area networks have benefits for "geeks" or "techno-nerds". However, a LAN can greatly increase your capacity and versatility and reduce your need to buy additional computer components. Programs such as Windows 95 and Windows NT have all of the necessary software incorporated to create a simple network for a small number of users. Installation of an Ethernet NIC (Network Interface Card) into the PC and cabling is all that is required to connect 2 computers. If more than 2 computers are to be connected, an Ethernet Hub will also be needed. This hub is a fairly inexpensive device.

Local area networks implemented in a large corporate environment tend to be extremely complex due to the number of users and the hardware coordination required. Maintenance and troubleshooting become serious issues because of the tremendous amount of cable required to connect all users to the network. Fortunately for small enterprises, establishing a local area network can be much easier..

The toughest part of creating a local area network within a residence or small office is the cabling required to connect multiple devices located in different rooms. In an existing structure, the cost of retrofitting the wiring can be significant and may be prohibitive. You might consider rearranging your layout to minimize the cost. However, in new construction, such as a new home, proper wiring can be installed for a fairly minimal cost.

What will a Local Area Network do for me?

A local area network allows individuals to work more efficiently, especially when performing work that is very computer intensive, i.e., computer-aided design, graphic arts, and financial analysis. When multiple computers are connected, one can be dedicated to a very technical task while another controls other aspects of the process. Files can be passed from one computer to another until the file is ultimately passed on for archiving or sent to one of several available printers. In the residential environment, this means that a child can send his special book report to the high quality printer in Dad's study without having to save it on a floppy disk, interrupt Dad, and take over his computer to print it. Also, Mom can scan a picture in the child's room and send the file down to the computer in the home office to attach to a greeting card.

Another advantage of a local area network is the ability to back-up files. Backups are one of the most overlooked aspects of personal computing and have saved countless hours of trying to recreate files from disks or memory. Important information on one computer can be saved automatically to the hard drive on another computer connected to the network. LANs provide an extremely simple and efficient back-up mechanism.

Finally, using high speed Internet access methods such as cable modems, USWest Megabit service or WantWeb, multiple users on the network can access the Internet at the same time. Dad can be monitoring investments; Mom can be downloading and reading e-mail; the children can be doing research for a book report or playing games, simultaneously.

Summary

In summary, Local Area Networks offer several advantages - more efficient utilization of available system resources, easier file transfer, automatic file back-ups, and simultaneous Internet access. These are more than adequate to implement a Local Area Network. With the right cable in place and the software provided within Windows 95or NT, implementing a LAN is a simpler and easier task then ever before.

This information has been presented by Web Mountain Technologies. For more information, contact us at info@webmtn.com.

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