

Networking in the Middle Market

What is a Computer Network?

A Computer Network is an interconnected system that is used to transmit or receive information. It may contain any combination of the following: computers, printers, fax machines, data storage, audio/visual display devices and telephones.

Why does my Business need a network?

Technology is critical for a business to remain competitive. Using technology like a computer network will make your people more productive by allowing them to access and share information more in a very effective manner. A network will also allow your business to better utilize other office technologies (i.e., printers and copiers) and therefor reduce overall hardware costs.

Types of Networks - Peer-to-Peer and Client-Server

Peer-to-Peer network

The most basic form of networking is a Peer-To-Peer system. In a Peer-to Peer system each computer is connected directly to the other computers on the network allowing multiple users to share information without a centralized computer or server. Peripheral technology such as printers and scanners can be added to the Peer-To-Peer system allowing all members of the network to share these resources.

Client-Server network

In today's business world a more common network is a Client-Server system. In a Client-Server system all computers are connected to a centralized server. This server is used to manage the entire Client-Server system using specialized software designed for this specific purpose. Some of the tasks of this software include file sharing, printer sharing, connecting users to the internet or sending and receiving e-mail. In addition to managing the Client-Server system, the centralized server is used to store and allow access to shared information in a central location. The "Clients" in the Client-Server system can be individual computers, printers, copiers or any other device for that matter.

Peer-to-Peer vs. Client-Server Network

Both of these networks allow multiple users to share and exchange information and resources with each other, but their functions and benefits differ widely.

Peer-to-Peer systems are simple to configure, easy to install and certainly a low-cost solution but they are limited in the functions they can perform in that they have no centralized location to store information because the information and resources are shared from computer to computer. In the event one computer shuts down, the other computers in the network cannot access the data stored on that computer.

An additional drawback of this type of network is that it has no centralized security safeguards so it is insecure. Anybody connected to the network can get access to the other computers on the network relatively easily. In cases where more than five computers are connected to the network it has the tendency to go slow.

Conversely, Client-Server systems can be a bit more complex to set up but can also have a more significant impact on the performance of your business. Given that the Client computers on a Client-Server system don't perform functions such as storing or transmitting large amounts of data for other computers it allows these Client computers to run faster. In addition a Server acts as single centralized unit for the entire network so internet connections can be easily monitored and controlled.



Another advantage of a centralized server is that it can control the backing up of information - which can help to prevent data loss and provide additional security for that information. A Centralized server can also increase the security of the important data like financial information by allowing controlled access to different users.

Lastly, in Client/Server system there is single point of access for the entire network so users are not dependent on each other's computers as they are in a Peer-To-Peer system.

The bottom line - if your business has more than five computers, centralizing the network on a server allows you to both share and control information while sharing and controlling resources. This allows your business to run more efficiently and effectively.

Specific Ways a Network Can Impact Your Business

Collaboration: A network will allow your staff to share information which includes allowing them to collaborate on a single document which is otherwise not possible with individual computers.

Printer/Copier/Fax sharing: All employees that are on the network can share the same printer, copier or fax machine if these devices are included in the network. This will allow for better deployment of capital.

Data Security: Back-ups are critical for a business to prevent the loss of valuable information. With a network it is relatively easy to back up the company data and make it available if it is necessary. In addition, a network allows better control over outside influences by controlling access to the internet.

Return on Investment: Network technology when utilized appropriately starts paying off quickly in form of increased employee productivity and reduced operating costs. According to a recent study, middle market business owners are able to recover their hardware and software investments in less than 3 months through productivity gains and cost avoidance. The survey concluded that server networks are helping companies to extend their geographic reach, find new customers, and increase revenues while holding costs steady.

Conclusion

Consider your current situation and your specific needs when deciding if Networking is right for your business. And if so remember that Peer-To-Peer systems are cheaper and easier to implement and maintain, but Client/Server systems can be much more useful for a business as it leads to greater productivity, security and lower costs.