Small Business Networking

Why a network is an essential productivity tool for any small business

Effective technology is essential for small businesses looking to increase the productivity of their people and business. Introducing technology such as a computer networks can help them to stay competitive by increasing productivity and by reducing hardware costs. Even simple networks make sharing information and resources easier, provide better security and enable easy backup facilities for any small business.

Why a network is essential for your small business

One of the primary challenges small business owners face, is acquiring the right technology for their business. However getting the most of this technology investment is still a big challenge for many small businesses. For example, the business may have started with a single computer and printer but as the business grew, more PC's and other peripherals are added. As a result, the demand for printers and other hardware devices increases and sharing becomes more problematic. Rather than purchasing separate hardware peripherals for each computer, a network provides the solution for a single printer to be shared among computers. Networking of computers is essential as the business grows larger. If the small business has more than one computer, networking the computers can make all the difference, ensuring smoother operations. In fact, a network becomes the foundation for a productive and secure small business operation.

What is a network?

A network is a system containing any combination of computers, printers, fax machines, data storage, audio or visual display devices, or telephones interconnected by cables used to transmit or receive information.

Two Types of Networks: Peer-to-Peer and Client/Server

Peer-to-Peer networking

A peer-to-peer network is the most basic type of network that allows multiple users to share information or resources such as printers and scanners. In a peer-to-peer network, each computer is connected directly to the other computers. Every computer within the network holds equal capabilities. Each computer can share resources or information with any other computer on the network without a centralised computer or server. In this type of network, each connected computer has an equal responsibility and role.
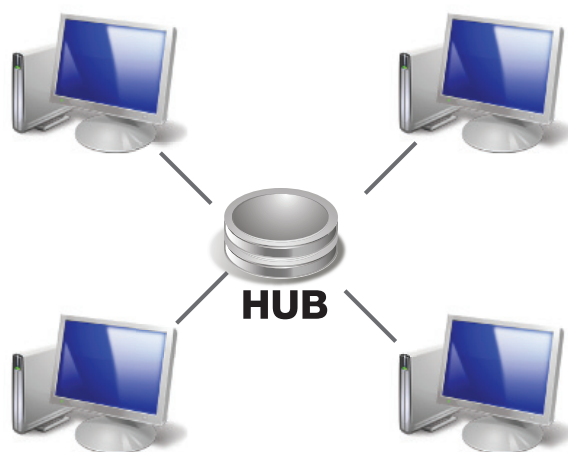

Figure 1: Peer to Peer Network

Client/Server networking

In a client-server network, all computers are connected to the server or centralised computer. A single computer called a server is used to manage the entire network and stores shared information, in a central location. Servers are run with specific server software designed to manage the computer network and serve as a central place to store data. The clients in the network can be an individual computer, printer, scanner or any other device. The server software performs specific tasks such as file sharing, printer sharing, connecting multiple users to the internet or sending and receiving email for each of the network's clients.
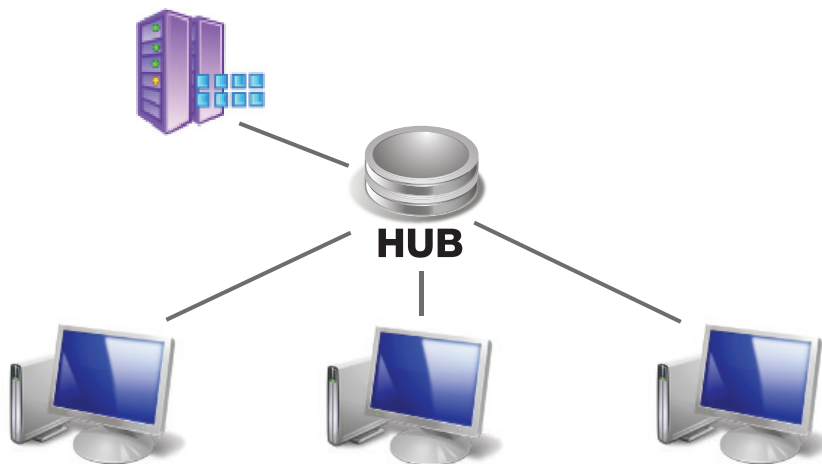

Figure 2: Client/Server Network

Peer-to-Peer vs. Client/Server Network

Both of these networks serve the same purpose of allowing multiple users to share and exchange information and resources with each other. But the functions and benefits differ widely.

Peer-to-Peer networks are simple to configure, easy to install and are certainly a low-cost solution but are very limited in the functions they can perform. For example, peer-to-peer networks have no centralised location to store the information because the information and resources are shared from one computer to another. In the event of one computer shutting down, the other computers within that network are unable to access the data stored in that computer.

One major downside of this type of network, is that it has no centralised security safeguards, so it is relatively insecure. Anybody connected to the network can gain access to the other PCs and this in itself holds concerns for security. In cases where more than five PC's are connected to one network, each PC has the tendency to run slower.

Client/server network can remarkably improve the business performance because of the different functions it can perform. The server can back up information saving time and preventing data loss as well as providing security for information. As the server acts as a single centralised unit for the whole network, internet connection can be easily monitored and controlled. Another advantage is that the performance of the computers improves because they are unable to perform functions such as, storing large amounts of data for other computers. This allows the clients computers to run faster. Besides this, in a client/server network there is a 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 network. Servers also increase the security of the vital data, such as financial information, by allowing controlled access to different users. Hence, if the small business has more than five computers, centralising the network on a server, allows the small business owners to utilise tools and services that can help to attain impressive time and cost savings.

6 Ways a Network Can Influence Small Business Performance

Collaboration: A network allows employees to share and exchange information. A network provides access to a variety of tools by which employees can communicate with each other. Besides this, it also offers collaboration features and allows multiple users to contribute to a single document which is otherwise difficult to manage with individual computers.

File sharing: A network makes it possible to access a file stored on another computer. Multiple users can share the same files eliminating the need for creating and managing multiple versions.

Printer/Fax sharing: Several computers can share the same printer or fax machine, once they are connected through a network. As a result, there is no need to purchase and connect separate printers and devices to every computer.

Data protection: Backing-up data is essential for a business to prevent loss of valuable business information. With a network it becomes routine and secure, to back up the company data, available for retrieval when necessary

Shared Internet access: With a network it is possible to share a single internet connection among multiple computers. In-house email systems can also be easily implemented with the client/server network.

Increases the productivity, reduces costs and saves time: When a small business has a computer network, it increases the productivity of employees and reduces costs. With a network, multiple employees can share the company resources such as printers, fax machines or any other hardware device. Multiple users can access the internet at the same time. Consequently the hardware costs of the company are reduced and productivity of employees is increased. A network also helps save time by providing easy back up solutions.

Payback Period of Network

Small business owners can reap enormous benefits by networking their computers. But sometimes concerns about hardware, software and installation costs of networks (particularly client/server networks) becomes a main deterrent in adapting to this new technology. It should be noted, that the network technology shows early returns by way of increased employee productivity and reduced operating costs.

According to a study conducted by Forbes*, small business owners are quickly recovering investments and realising enormous benefits from server technology. Small businesses using server networks find that their employees can now perform an average of 20% more revenue producing tasks. The study has shown that the average payback period, of server networks ranges from 2.4 to 4.9 months. Most small businesses were able to recover their hardware and software investments in less than 2.5 months. The survey concluded that server networks are helping smaller firms extend their geographic reach, locate new customers, and increase revenues whilst holding costs steady or decreasing them.

Conclusions and Recommendations

In conclusion, peer-to-peer networks are cheaper and easier to implement and maintain, and client/server networks can be much more useful for a small business as it leads to greater productivity, security and lower costs.

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Recommendations:

Check out the following before you decide on your network solutions:

- ✔ A network can make a considerable difference to your small business if you have more than one computer and your employees need to share printers, scanners, internet connection and computer files.
    - It would be more feasible for you to establish a peer-to-peer network if you have five PCs or less, in your office
    - If you have more than five PCs, the client/ server network is the most suitable solution for your company.
- ✔ Windows Small Business Server 2008 is the correct and affordable network solution for establishing a client/ server network in your company. If you have a minimum of two, up to a maximum of seventy five computers in your company, this solution provides you with file and printer sharing facilities, internet connection sharing capabilities, secure internet connectivity, support for your mobile devices, easy backup and restore facilities and many other advanced features.

MIDAC Solutions

Phone: 416-690-5575

Fax: 647-722-7835

Email: sales@MIDAC.ca

Web: www.MIDAC.ca