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 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 businesses.

Why a network is essential for your small business

One of the primary challenges small business owners face is to get the right technology into 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, the networking the computers can make the difference in smoother operations. In fact, a network becomes the foundation for a productive and secure small business operation.

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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 with each treated equal on the network. Each computer can share resources or information with any other computer on the network without a centralized computer or server. In this type of network, each connected computer has an equal responsibility and role.

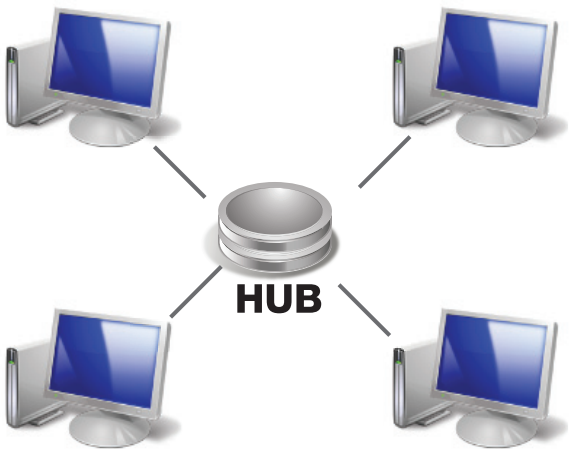

Figure 1: Peer to Peer Network

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Client/Server networking

In a client-server network, all computers are connected to the server or centralized 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 e-mail for each of the network's client.

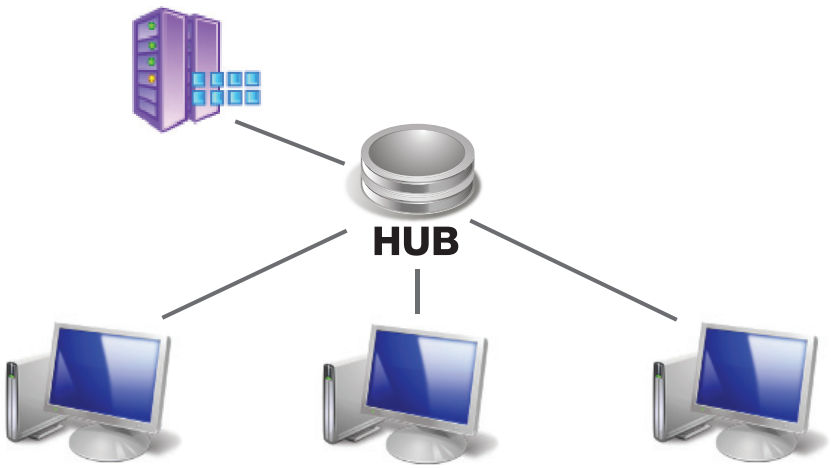

Figure 2: Client/Server Network

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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 certainly a low-cost solution but are very limited in the functions they can perform. For example, peer-to-peer networks have no centralized location to store the information because the information and resources are shared from one computer to another. In the event one computer shuts down, other computers cannot access the data stored in that computer.

One major downside of this type of network is that it has no centralized security safeguards so it is relatively insecure. Anybody connected to the network can get access to the just a few PCs and few security concerns. In case more than five or so PC's are connected to the network it has the tendency to go slow.

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 server acts as single centralized unit for whole of the network so internet connection can be easily monitored and controlled. Another advantage is that performance of computers improves because computers don't perform functions such as storing large amounts of data for other computers. This allows the client computers to run faster. Besides this, in client/server network 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 network. Servers also increase the security of the vital data like financial information by allowing controlled access to different users. Hence if the small business has more than five computers then centralizing the network on a server allows the small business owners to have tools and services that can help to attain impressive time and cost savings.

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6 Ways a Network Can Influence Small Business Performance

Collaboration: A network allows employees to share and exchange information. A network provides access to 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 not possible with individual computers.

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

Printer/Fax sharing: Several computers can share the same printer or fax machine if computers are connected through a network. As a result, there is no need of buying and connecting separate printers and devices to every company 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 ready for retrieval when necessary

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

Increases the productivity, reduces costs and saves time: When a small business has 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.

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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) became a main deterrent in adoption of this technology. But the network technology starts paying quickly in form of increased employee productivity and reduced operating costs.

According to a study conducted by Forbes*, small business owners are quickly recovering investments and realizing enormous benefits from server technology. Small businesses using server networks find that their employees can now perform an average of 20 percent more revenue-producing tasks. The study has shown that average payback period of server network 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, find new customers, and increase revenues while holding costs steady or decreasing them.

Conclusions and Recommendations

In conclusion, peer-to-peer network is cheaper and easier to implement and maintain, but client/server network 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 go for network solutions:

- A network can make a difference if your small business has more than one computer and your employees feel the need to share printers, scanners etc., share an internet connection and computer files.
- It would be more feasible for you to establish peer-to-peer network if you have five or less than five PCs in your office.
- If you more than five PCs, the client/ server network is likely suitable for your company.
- Windows Small Business Server 2008 can be a right and affordable network solution for establishing client/ server network in your company, if you have two to seventy five computers in your company. It provides you 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.

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