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Networking Basics for Small Businesses

A guide for businesses with 2-50 computers.

Networking Basics for Small Businesses.

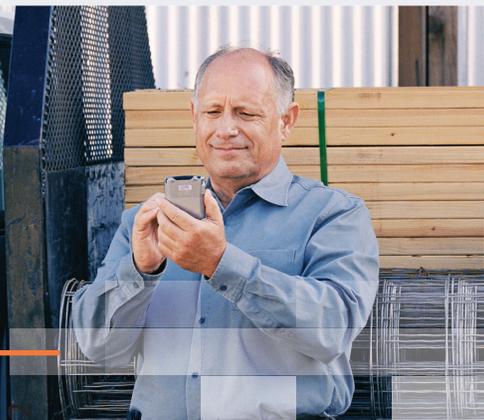
Your small business has many ongoing needs: to better organize and protect business information, to communicate effectively and professionally with customers and suppliers, and to make the most of your existing computers and office equipment. Introducing the right technology into your business can help you accomplish these goals and save you time and money, keeping you focused on your business, not on technology. The foundation of an effective technology solution starts with a network.

What is a network?

A network allows you to more easily share information and resources (such as printers) from one computer to another, which helps you increase employee productivity and reduce costs. For example, with a network, multiple employees can access the Internet or company e-mail at the same time, or share the same fax machine or other office equipment. A network can help you save time and money, protect your business data, and increase efficiencies in your business.

Small businesses that use networks and servers find that the investment pays for itself quickly through increased productivity. For example, according to a survey published by Forbes*, increased employee productivity and reduced operating costs help pay for software as well as hardware, installation and support — on average, within five months.

*Forbes "Windows Small Business Server 2003 Out-of-the-Box ROI for Small Business" white paper. Published 2003.

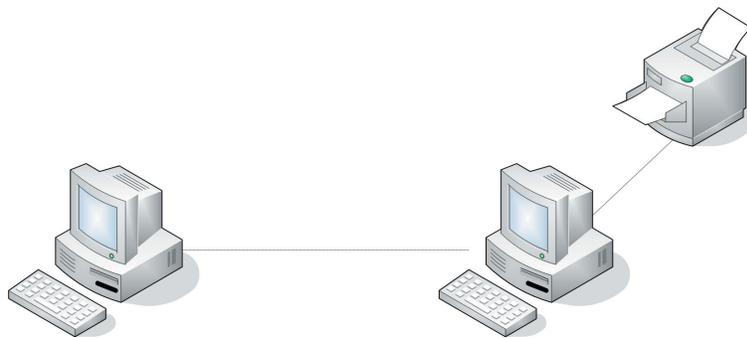


Introduction to Networking.

The two most common types of networks are peer-to-peer and client/server. Both networks serve the same purpose – they allow users to share information and resources.

Peer-to-Peer Networks

The simplest way to allow multiple users to share information or resources (such as printers and fax machines) is to connect multiple computers together in a peer-to-peer network. A common way to set up a peer-to-peer network is to connect computers running workgroup or client software, such as Windows XP, to a hub or to use a wireless access point. While this is a simple, low-cost solution, there are limitations in what a peer-to-peer network can do. For example, there are no centralized security safeguards. Information and resources are shared from each individual computer and if one computer shuts down, loses power or loses data, no one can access the information on that computer. Peer-to-peer networks also tend to slow down when more than five computers are connected.



Peer-to-Peer networks are the most basic type of network.

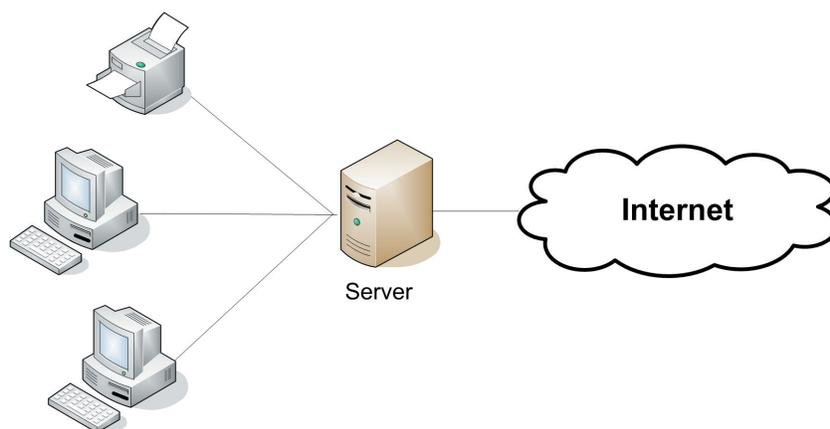
Introduction to Networking.

Client/Server Networks

A client/server network uses a single, specialized computer (the server) to centralize information and resources. The server is designed to exclusively perform specific tasks such as file sharing, print processing, and Internet connectivity for each of the clients or computers. Additionally, servers can provide other services such as e-mail. The clients are individual computers, printers, or other remote devices (i.e. Windows Mobile-based Pocket PC or Smartphone).

The tools and services provided by client/server networks enable businesses to achieve dramatic time and cost savings, revolutionizing the way your small business can do work. For example, using a client/server network allows you to use fewer printers and to distribute faxes electronically, resulting in lower hardware costs and increased productivity. The server can back up information, which can save you time and prevent data loss. Also, because the server acts as a single access point, your Internet connection can be monitored and controlled, helping to enhance network security.

All of your computers become more efficient in a client/server network because the client computers are not bogged down by performing functions for other computers. There is also one centralized access point for information and resources, so users are not dependent on other computers like they are with a peer-to-peer network. Servers also improve security by managing access to files and data, such as financial information, documents and business presentations.



Client/Server networks allow you to centralize files and share printers and an Internet connection, resulting in greater productivity and cost savings.

Some More Server Basics.

Server computers make client/server networks possible. Because they play such a pivotal role in a network, they also make possible many other significant time and cost saving benefits.

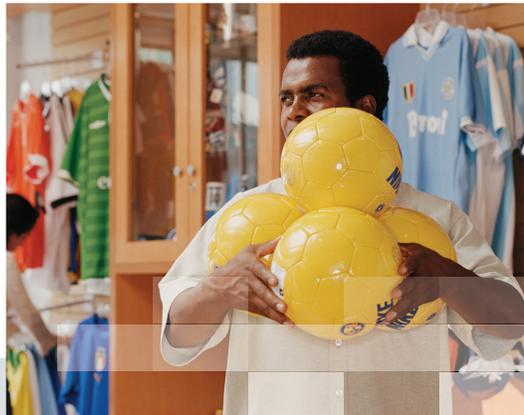
Server Operating Systems

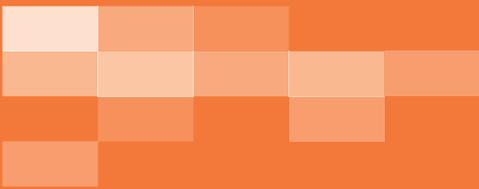
Most server operating systems can control security and allow you to dictate which users, computers or devices can access server resources and how they use those resources. Server operating systems also allow other server-specific programs, or server applications, to run. For example, a server can run a line of business application that client computers can commonly access.

Server Applications

An application is another term for a computer program. Applications are the software instructions that execute a task or a specific set of tasks. Personal computer applications perform tasks for the user of the application. Server computer applications can perform volumes of tasks for many users at once.

At one time, only large companies could afford to have servers because of the cost and complexity of buying, maintaining and administering these special computers. This is no longer the case. New technologies, designed specifically for small businesses like yours, provide solutions at lower costs with simplified server administration and maintenance. This allows any business to take advantage of the benefits of server computers and client/server networking. So, what can a server do for your business and what benefits do you gain?





What Servers Can Do for Your Business.

A server saves your business time and money and increases the efficiency and productivity of your employees.

Central Data Storage and Backup

Storing files on a server—rather than on individual computer hard drives—reduces the need for each employee to back up files on their computer. If an employee's computer crashes and files are lost, it could take days to reconstruct the system and months to recreate the lost work. Controlling document versions can also be a challenging, cumbersome task that can result in wasted time and professional embarrassment if the wrong version of a document is released. Servers can be configured for centralized data storage, which makes it much easier for coworkers to access documents and work together on collaborative projects. Finally, servers can make it possible to use many server-based business applications, such as accounting, business planning and contact management software, which use a centralized database so all employees see the same information. The right server will make using server-based applications work properly from day one.

Shared Printing, Fax and Internet Connections

Server technology allows you to reduce the number of printers and fax machines you need to efficiently run your business. The server can be configured to automatically route print jobs to your central printer; incoming faxes can be digitized and delivered directly to each employee's computer. A single, shared Internet connection eliminates the need for various cable modems or DSL connections and multiple configurations that require support. Managing a single account is much simpler, and server monitoring features allow you to track and control internal Internet use. A server system will make sharing all of your business assets across your network quick and easy and will ultimately help to save you money.

"Windows Small Business Server 2003 helps smaller firms extend their geographic reach, find new customers, and increase revenues while holding costs steady or decreasing them."

Forbes.com

Security

Servers can help improve security by controlling your contact with the Internet. A firewall is technology that helps control Internet communication, helping to protect your business from hackers that try to reach your computer (or those computers in your network) through the Internet. The best server systems have a built-in firewall. Server-controlled Internet connections can be configured to filter junk e-mail. Servers can have software that provides security settings, which let you establish different access levels for different employees, vendors or clients who access your network. You must ensure that the server in your business provides adequate protection for your network.

E-mail and Calendars

While it is possible to outsource your e-mail to an Internet Service Provider (ISP), there are significant advantages to hosting your own e-mail system. Having your own system in-house brings an element of professionalism and sophistication while improving efficiency and organization. Hosting your own system allows you to:

- Create and remove addresses as needed. Personnel changes won't require a call to your ISP.
- Create multiple custom e-mail

addresses such as sales@contosohomes.com, which can be delivered to the appropriate person's e-mail inbox or distributed to a group of people.

Only a few servers for small business have an integrated, easy to use e-mail system that is reliable and will grow with your business.

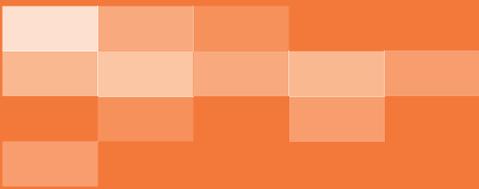
Internal Company Web site

An intranet is a Web site that is accessible only to authorized users within a network. A company intranet typically contains shared business documents such as contracts, product and price lists, budgets and marketing materials. Intranets can serve

"SBS 2003 has revitalized the way we do business. We estimate we'll be able to increase sales over the next year or so by \$1.5 million and raise our profit margins as well."

Jodi Wahlund, President, 2 Days Bath

many purposes and help to increase productivity, allowing individuals the ability to store and access data specific to their business for easily and commonly-accessed files and other applications or internal information. Intranets are a powerful way for employees to work together. Not all servers come with a built-in intranet.



What Servers Can Do for Your Business.

Network Administration

Some systems can still require complex configuration to run smoothly. But many modern servers can be simple and cost effective to administer. The use of a consultant is advisable for initial setup, but with the right server system routine tasks such as adding a new employee's computer

Growth

Server flexibility refers to how a system responds and performs as the number of users grows. Flexibility is one of the major strengths of the client/server network, because you can simply add another server when needed. Experiencing dramatic growth? Upgrading to a more robust system may be in order, and a good first server makes upgrades smooth and easy. That is why it is a good idea to consider your strategy for managing the growth of your business and your technology needs. Make sure you have a system that can grow with your business needs.

"It's hard to beat the value and powerful out-of-the-box functionality of SBS 2003."

PC Magazine

or recovering lost documents are easy for you to perform. For additional cost-savings, a server can be configured to continually monitor itself. Some servers can even produce regular reports on the health of the network and system usage, with automatic e-mail alerts saving you a call to your consultant. Make sure your server system will give you the information you need to identify and solve problems quickly.

Choosing the Right Server Solution for Your Business.

The size and needs of an organization often dictate the computing requirements of a business. Microsoft has found that most small businesses share the same essential computing needs: network security, central data storage, Internet access sharing, e-mail service, tools to improve teamwork, and the ability for employees to access information while they are away from the office.

To meet those needs, Microsoft developed Windows® Small Business Server 2003 (SBS 2003), an affordable and complete network solution for small businesses. An easy-to-use solution, SBS 2003 provides essential networking and Internet connection sharing capabilities, e-mail services, teamwork tools, remote access tools, database software, and security software – all designed to help you keep your business running and data secure, maximize your employee productivity and improve your customer communications.



Choosing the Right Server Solution for Your Business

Keep your business running and your data secure.

Windows Small Business Server 2003 (SBS 2003) secures your network, keeps it up-and-running and automatically protects your business information, allowing you to spend more time focusing on your business and less time and money on technology issues.

- Keep your business up and running with an operating system that provides your employees with a working environment they can depend on.
- Protect your business and prevent lost productivity. SBS 2003 provides an infrastructure with enhanced security, including built-in firewall protection and security enhanced remote access.
- Prevent data loss by automatically backing up company information. With SBS 2003, your employees can easily retrieve accidentally deleted files and restore previous versions.

Maximize your employee productivity.

Your employees can easily find and share information in one centralized location, effectively communicate and collaborate with their peers and remotely access business information and resources.

- Provide one central place to store business information, making it easy for your employees to find and access the data they need at any time.
- Improve team performance by providing your employees with an internal Web site, where they can find and share documents and collaborate on group projects.
- Get the most value from your technology investment. SBS 2003 enables you to share resources and equipment such as printers, fax machines and phone lines.
- Access business information when away from the office. Employees can stay productive while on the road by having access to their e-mail, internal Web site, network files and even business applications from any

Choosing the Right Server Solution for Your Business

Connect with customers.

Windows Small Business Server 2003 (SBS 2003) provides enterprise-class tools to help enhance your company identity and stay connected with your customers from virtually anywhere, anytime.

- Connect with customers more professionally. With SBS 2003, you can host your own company Web site and e-mail, increasing credibility with your customers.
- Stay connected with customers from anywhere, anytime. Your employees can communicate with customers whether they're in the office, at home or on the road.
- Streamline customer communications with one-to-many fax and e-mail capabilities. Employees can also create and send faxes right from their desktops.

"We're receiving five times the return on our investment in the first year."

Mark Turner, CCM Homes



Learn More about Windows Small Business Server 2003

We invite you to visit the Windows
Small Business Server 2003 Web site at
<http://www.microsoft.com/sbs>.

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