

# Networking Basics for Small Businesses

A guide for businesses with 2-50 computers.

# What can a server do for your business?

Using a single, central computer—or server—to link together all of the computers in your company provides four principal benefits:

## **INCREASES PRODUCTIVITY AND EFFICIENCY**

Storing files in a central location saves everyone a lot of time and effort. Your employees don't have to figure out who is currently using a particular document, and they don't have to send out e-mails to request copies. With a server, you can access the needed files immediately. You can also manage collaborative projects much more efficiently. Whenever someone updates a file, the new information is available instantly to the entire team.

## **SAVES MONEY**

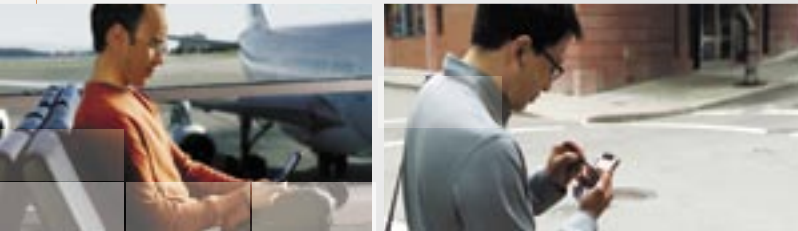
The cost of completing specific tasks often decreases when a business starts using a server. It simply takes less time to get the job done. According to a survey published by Forbes.com (see page 6), these savings pay for the cost of the software as well as hardware, installation and support —on average, within five months.

## **HELPS PROTECT CUSTOMER INFORMATION AND BUSINESS DATA**

Security is essential for any business that's connected to the Internet. The server comes with built-in features that help guard against unwanted intruders. In addition, automatic back-ups help protect your data in the event of power failure or human error.

## **LETS YOU WORK ON THE ROAD**

Remote access allows you to easily connect to your server and the desktop computers connected to your server from any computer with Internet access. Whether you're using a laptop on the road or your home computer, you'll have access to your e-mail, schedule and files—exactly as if you were in the office. It's easy to do and has security built-in.



# Introduction to networking

## **PEER-TO-PEER: THE MOST BASIC NETWORK**

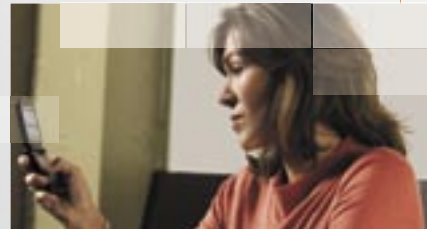
The simplest way to connect multiple users is called a peer-to-peer network, which links together a series of computers via cables. This type of network allows users to share printers and exchange files. But there is no centralized data storage or security safeguards; the computers need to be close together; and all of the computers have to be turned on. And a peer-to-peer network tends to slow down when more than five computers are connected.

## **CLIENT/SERVER NETWORKS: EXPAND YOUR CAPABILITIES**

A client/server network uses a single, robust computer (the server) as the central hub that connects all of your employees' computers. The server is designed to efficiently and more securely manage tasks such as file sharing, print processing, e-mail and network management. The clients are individual desktop PCs, laptops or remote devices.

By leveraging the resources of their client/server network, and using the Internet and wireless technology, businesses are achieving dramatic breakthroughs in the way their employees work. Using the smallest number of strategically located printers and distributing faxes electronically results in lower hardware costs and increased productivity.

The ability to connect everyone to the Internet from a single point is both cost effective and more secure. At the same time, the network connects businesses to global resources and provides potentially unlimited reach, with an online presence that can easily rival that of much larger companies.



## What you should know about Client/Server Networks

### **CENTRAL DATA STORAGE**

Using a server promotes greater efficiency throughout your business. For example, storing files on the server—rather than each individual's hard drive—reduces the need for employees to individually back up files, because the server automatically runs regular system-wide backups. Centralized data storage also makes it much easier for coworkers to access documents and work together on collaborative projects. Finally, a wide variety of business applications, or programs, such as accounting, business planning and contact management software, work in conjunction with a centralized database.

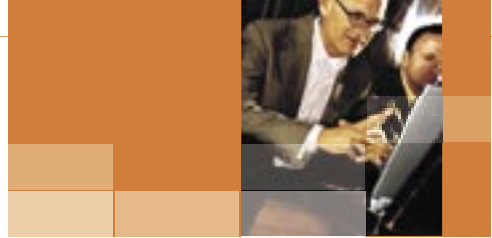
### **SHARED PRINTING, FAXING AND INTERNET ACCESS**

Server technology also allows you to reduce the number of printers and fax machines you need. The server automatically routes print jobs to your central printer; incoming faxes can be digitized and delivered directly to each employee's desktop. A single, shared Internet connection eliminates the need for modems or DSL hookups and multiple configurations. Managing a single account is much simpler, and the server's monitoring features allow you to track and control internal Internet use.

### **SECURITY**

Client/server networks improve security by limiting your company to a single point of contact to the Internet. A firewall helps protect your business from hackers and viruses. Filtering unwanted e-mail or spam is another benefit. Security settings let you establish appropriate access levels for employees, vendors or clients who access the system remotely.





## **E-MAIL AND SCHEDULING**

While it's possible to outsource your e-mail to an Internet Service Provider, there are significant advantages to hosting your own e-mail system. Every employee's address will have your company name as part of the e-mail address, so every communication reinforces your brand. And hosted e-mail also includes tools like calendars and scheduling.

## **REMOTE ACCESS**

Remote access enables you or any of your employees to log in to the company network, using either your own laptop or any other available computer. Using a secure login procedure, you gain access to a screen that looks exactly like your desktop at work. You can use it while traveling or to connect employees who work in remote offices.

Mobile devices include web-enabled cell phones and personal digital assistants. Employees using these devices can access their e-mail and calendars at their convenience while away from the office.

## **INTRANETS**

An intranet is a website that is accessible only to authorized users within a domain. A company intranet typically contains business documents such as contracts, product and

price lists, budgets, tax returns, marketing materials and works in progress. You can grant access to specific users inside your company.

## **NETWORK ADMINISTRATION**

Today's client/server networks are simple and cost effective to administer. Use of a consultant is advisable for initial setup, but routine tasks (adding a licensed user or recovering lost documents) are easy to perform in-house. The system continually monitors itself and produces regular reports on the health of the network and system usage, with automatic e-mail alerts if anything is amiss.

## **GROWTH**

Flexibility refers to the ability of a system to respond and perform as the number of users grows. Flexibility is one of the major strengths of the client/server network, as you can simply add another server when needed. Experiencing dramatic growth? Upgrading to a more robust system may be in order. That's why it's a good idea to consider your migration path for managing the growth of your business and its technology needs.



## Breakthroughs for businesses in four key areas

### **SHARED RESOURCES MAKE YOUR BUSINESS MORE PRODUCTIVE**

Most business owners experience ongoing pressures that require them to execute tasks quickly and reliably—without spending a lot of money. Like finding the most up-to-date version of a contract. Or faxing your new pricelist to all of your customers. Or scheduling an important meeting.

Microsoft® Windows® Small Business Server 2003 can help you achieve a more productive workplace. You and your employees can share information promptly and effectively, and these improvements can strengthen your customer relationships.

With Windows Small Business Server 2003, everyone in your company can coordinate their schedules, download files, and manage and integrate documents and projects from one central location. You can create your own internal website, allowing employees to share document libraries, announcements, events and links. Key details are less likely to get lost, because they're more easily integrated and stored. You can conference electronically, or team up on a client account, budget or RFP—all through Windows SharePoint™ Services.

Windows Small Business Server 2003's collaborative tools can revolutionize your workplace processes and allow you to get more value out of your PCs. With so many

routine tasks automated, and so many ways to streamline communications and manage team efforts, your company can reap big gains in productivity.

### **ENHANCED SECURITY LETS YOU FOCUS ON YOUR BUSINESS**

Windows Small Business Server 2003 is built on Windows Server™ 2003, the most reliable and secure network operating system Microsoft has ever delivered. You'll be able to more securely back up your data and shield your system from virus and spam exposure and unauthorized access.

Once it's up and running, Windows Small Business Server 2003's system monitoring tools and backup capabilities are automatic. To guard against losing data, default settings will back up all of your employees' files. A feature called Volume Shadow Copy can even restore accidentally deleted or overwritten files. And your employees have the ability to retrieve these files on their own.

Many of Windows Small Business Server 2003's security features are completely automated. An internal firewall helps protect against unwelcome Internet intruders. Junk mail controls lock out known spammers and remove dangerous e-mail attachments. Software restriction policies prevent unapproved installations, helping to protect your system against viruses.



Windows Small Business Server 2003 helps your operations run seamlessly, dependably and more securely—so you can get back to business.

### **REMOTE ACCESS KEEPS YOU CONNECTED AND IN CONTROL**

Windows Small Business Server 2003 makes it easy for you and your employees to work remotely. Simply log-on using any computer connected to the Internet, and within moments you'll have full access to your desktop at work.

When you're traveling or working at a remote location, you can receive and answer e-mail, update your schedule or keep the momentum going on a work in progress. You'll never have to worry about forgetting a key document.

Best of all, you don't even have to carry a laptop to access your Remote Web Workplace. You can use a local computer that has an Internet connection, or receive e-mail and schedule updates via mobile devices like Smartphones or PDAs.

With Windows Small Business Server 2003's remote access features, you'll have more control, even when you're not in the office.

### **IT ALL ADDS UP TO EXCEPTIONAL VALUE FOR YOUR BUSINESS**

The ultimate test for any investment in your business is how much value it really adds. Does the technology enable your business to be more efficient?

The answer is a definite yes, according to Out-of-the-box ROI for Small Businesses, a survey of 25 users of Windows Small Business Server 2003, published byForbes.com. The businesses in the survey reported that Windows Small Business Server 2003 increased their employees' productivity by an average of 20%, as a result of "the ability to find and share documents easily, collaborate on projects, automate many routine tasks, and access the workplace remotely."

Importantly, these gains come at a low initial cost, so the returns on investment can be dramatic—on average, nearly 1000%. Users of Windows Small Business Server 2003 recouped their total investment, which includes software, hardware, installation and support, in an average of five months. In short, "Small business owners are quickly recovering investments and realizing enormous benefits."

The full text of the report can be accessed at:  
<http://www.microsoft.com/windowsserver2003/sbs/evaluation/roi/outofboxROI.msp>



## CUSTOMER PROFILE

**Business:** Bathroom Renovation Company

**Established:** 1996

**Employees:** 23

**Location:** Wilmington, DE

## 2 Days Bath

### MOVE FROM PEER-TO-PEER REVITALIZES BUSINESS PROCESSES FOR 2 DAYS BATH

Since its founding in 1996, 2 Days Bath had experienced double-digit growth, and its day-to-day operations and communications processes were in need of an extreme makeover. Its service promise—to complete a bathroom renovation in two days or less—held great appeal to customers. But the company's peer-to-peer network couldn't keep up with business demands. 2 Days Bath was experiencing system crashes and slowdowns, and their network did not support the document sharing they needed to coordinate efforts on renovation projects.

"We were literally managing some of our jobs with sticky notes attached to the original work order," says Jodi Wahlund, President of 2 Days Bath. Basic communications between management, sales, installers and customers were disorganized.

The first step in revitalizing 2 Days Bath was to create a more stable, secure operating environment by deploying Windows Small Business Server 2003 to network all 15 desktop computers. The server gives the company a reliable platform for file sharing and remote access. Salespeople now have full access to sales, product and calendar information when in the field. Document Workspaces enable company management,

sales and installation teams to have a centralized, web-based repository of key business documents such as price lists, product descriptions and specs, and photo libraries to help make job management more efficient.

Company wide, communications have improved dramatically. Wahlund estimates that she and her co-owner husband Andy will be able to increase sales over the next year by about \$1.5 million and raise 2 Day Bath's profit margins as well. And the Wahlunds' new remote access capabilities have had a dramatic effect on their personal lives—they can now access their network from home and spend more time with their family.

*"It's hard to express the value and personal impact of having access to my network from home. I can flex my work schedule to meet the needs of my family. After six years of juggling schedules, I now have a very important piece of my family life back."*

Jodi Wahlund  
President, 2 Days Bath

## CUSTOMER PROFILE

**Business:** Pediatrics practice

**Established:** 2003

**Employees:** 7

**Location:** Beachwood, OH

## Advanced Pediatrics

### **EFFICIENCY GAINS HELP ADVANCED PEDIATRICS DELIVER EXCEPTIONAL PATIENT CARE**

Doctors Arthur Lavin and M. Stacia Dearmin launched their pediatric practice in January 2003 with the goal of providing the highest level of care to their patients. They drew from their previous experiences in practicing medicine to remedy barriers to what they wanted to achieve.

"Imagine a situation where each patient created another layer of paper on a desk," says Dr. Lavin. "Now imagine the difficulty in quickly retrieving a specific document when you have 2,500 individuals to keep track of." High on Dearmin and Lavin's list of goals were complete access to records, a system that supported interoffice communication, and the ability to stay connected with patients—and their records—when treatment needs extended beyond normal business hours.

Lavin and Dearmin targeted technology as the means to caring for their patients more comprehensively. Windows Small Business Server 2003 has been the central enabler in that process. Their new server allows all of Advanced Pediatrics' caregivers to have 24-hour-a-day access to patient records, helping them to attend to after-hour patient needs faster and better. And their new collaborative tools have helped staff to store and communicate critical information more efficiently.

Both doctors use Microsoft Office OneNote™ 2003 note-taking programs on their Tablet PCs to capture, organize and reuse notes electronically. These notes, along with other client information, meeting notes, calendars, newsletters, presentations and faxes are all shared with staff through the use of Windows Small Business Server 2003 and its Windows SharePoint™ Services. The site has become a central source of shared documents and files.

Lavin notes that the clinic's solution combines to reduce staffing needs by two-thirds versus a traditional paper-based medical practice—resulting in annual savings of more than \$60,000.

*"We needed a more efficiently run office in order to deliver the quality of care we were seeking in our new practice, and we turned to technology to help us with that goal."*

Stacia Dearmin, M.D.  
Cofounder, Advanced Pediatrics

## CUSTOMER PROFILE

**Business:** Nonprofit, quality-of-life services and economic development for SW Minnesota

**Staff:** Combined, 27

**Home Office:** Slayton, MN

## Southwest Regional Development Commission

### TWO MINNESOTA NONPROFITS JOIN FORCES TO SECURE DATA AND BOOST PERFORMANCE

Southwest Regional Development Commission and Southwest Minnesota Housing Partnership share office space, a vision for regional community development—and a server. Both organizations were suffering from security shortcomings and inadequate collaborative tools that their server, Novell Netware, did not address. They didn't have dedicated Internet addresses or firewall protection. They were unable to have separate e-mail distribution lists for each business, or shared folders and calendar visibility for team coordination. Data was distributed across all desktop computers because of the lack of available server space.

Implementing Windows Small Business Server 2003 addressed a host of security headaches for the two organizations, and enhanced employees' ability to work as a team. They now have a more secure way to centralize and maintain their databases. With the server protected by a firewall, e-mail is more secure and every e-mail message is scanned for spam and viruses. Each organization has secure separate e-mail distribution lists, along with shared calendars and public folders.

These community partners now have a server with plenty of storage space available for future needs. Staff members can access their

e-mail or shared data files directly from any remote Internet location. Login is easy and more secure, giving them the freedom to work off site. Their server-controlled database ensures complete back up of data daily, which has allowed more staff to access the database without performance loss.

Moving to Windows Small Business Server 2003 has enabled the two organizations to realize improved security and more productive access to information. Their efforts in the 14 Minnesota counties they collectively serve are now fully supported by their technology.

*"As a regional planning agency involved in issues statewide, our staff is often out of the office. Our new server gives us a secure means to access our system remotely, allowing access to our office resources while traveling—which increases our productivity while on the road."*

Jay Trusty  
Executive Director  
Southwest Regional Development Commission



## Independent media evaluations give high marks to Windows Small Business Server 2003.

PC Magazine awarded Windows Small Business Server 2003 Best of Show—Comdex (November 19, 2003) and followed up by rating it the best overall small business network (February 3, 2004).

*If you want a system offering all the features to be found on any enterprise network and an upgrade path that will accompany your own business's growth, then SBS 2003 is the right choice for you.*

**Oliver Kaven, PC Magazine**

CRN: The Newsweekly for Builders of Technology Solutions points out that Windows Small Business Server 2003 has earned the respect of the industry as a solid performer:

*Microsoft has demonstrated that SBS 2003 may very well be the best version yet of its venerable Small Business Server product line.*

**Frank Ohlhorst, CRN**

Windows & .NET Magazine focuses on the product's ease of use and suitability for all types of small businesses.

*Windows Small Business Server 2003 is clearly a winner... [It] is the perfect starting point for virtually any business, since it's so easy to setup and use.*

**Paul Thurrott, Windows & .NET Magazine**

## For more information:

We invite you to visit the Windows Small Business Server 2003 website at <http://www.microsoft.com/sbs>. You'll find the complete text of the reviews, product documentation and other technical resources, videos and an opportunity to download trial software.

Or you can contact your solution provider. To find a list of IT Consultants in your area, you can use the search feature at <http://directory.bcentral.com>.

### **Microsoft**

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