# Get Up to Speed

***Small office technology that can help your business take off.***

**By Jason Jackson**

Today, technology has made it simpler than ever to manage even the most mundane business tasks. While most solutions seem geared toward corporate clients with thousands of employees, technologically savvy companies have designed a number of affordable products and services — like those discussed below — with small offices and home-based businesses in mind. These tools let you spend more time concentrating on your core activities and less time worrying about the everyday responsibilities that come with running your business.

## Wireless and Virtual Networks

Computer networks have changed the way workers share information. Once found only in large organizations, networks are now so widespread that only the smallest small businesses can operate efficiently without one. A company without a computer network constructs unnecessary barriers against information sharing and makes it impractical for users to share printers and other computer peripherals.

In general, a network confined to a single office is referred to as a local area network (LAN). Traditionally, LANs consisted of two or more computers linked together by cables, enabling users to exchange files, access printers, and share most hardware components. In home-based businesses, however, the idea of installing more cables throughout the house is rarely met with much enthusiasm.

Fortunately, advances in wireless LAN technology make it possible for multiple PCs to share peripherals and a single Internet connection without running cables from workstation to workstation. Wireless LANs use electromagnetic airwaves to transmit information from one point to another. A DSL line or cable modem is attached to a base unit that serves as the hub of the wireless network. This unit then transmits instructions to a network card located in each PC or peripheral.

The coverage range for typical wireless LAN systems varies, but most let you place computers and peripherals anywhere within 100 feet of the base unit without affecting connectivity. Most computer users can configure a wireless LAN with ease, and system kits are available from most retailers for less than $400.

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For some businesses, a single LAN isn't enough. An office with multiple locations may want a wide area network (WAN) — two or more LANs linked together — to further improve information access. Since maintaining a dedicated connection between two or more points on a WAN can be costly and inconvenient, WANs of all sizes communicate across secure Internet connections on virtual private networks (VPNs).

A VPN is a private network constructed within a public network infrastructure. The main reason to implement a VPN is to take advantage of a widely used public communications infrastructure (like the Internet) while keeping at least some of your communication invisible to some people on that network. Simply put, a VPN lets two people from the same organization use the Internet to access information that casual Web surfers outside their organization cannot access.

By using firewalls and communication encryption to protect transmissions across the Internet, VPNs provide secure access to information and applications for remote employees, branch offices, and anybody else with an Internet connection and permission to access the system. Authorized users can access company file servers, contact-management systems, and internal Web sites from anyplace in the world, provided they have a computer with Internet access. However, this convenience comes at a cost — a full-scale VPN could cost thousands of dollars to implement and hundreds of hours to maintain. Some companies offer third-party VPN management and maintenance, but expect them to charge several hundred dollars each month in service fees.

## Internet Security

You don't need to run a high-profile Web site to draw the attention of hackers. Many users don't realize that a high-speed, "always-on" Internet connection is a two-way street. Potential intruders use scanners that randomly call IP addresses and attempt to connect with any port belonging to that address. Once a hacker identifies your IP address and a port, he or she can access your system. Without taking adequate security precautions, intruders will have as much access to your computer as you have to the rest of the Internet.

The first step in protecting your computer or network from unwanted guests involves installing a firewall. A firewall is a software application or hardware device that controls access to or from a protected system by examining and evaluating traffic that passes through it. For less than $50, you can purchase and install firewall software that informs you of attempted intrusions and details the severity of each attack. Look for an application that also notifies you when suspicious e-mail attachments arrive, as they may contain computer viruses.

For those seeking advanced firewall protection for a small network, a few hardware-based solutions are available for less than $500. Many firewall appliances are easy to set up, requiring users to simply install some software and plug in a hardware device between their Internet connection and their computer. However, keep in mind that most hardware-based firewalls were designed for large networks — and carry with them large price tags.

To further protect you from unwanted attacks, antivirus software — which generally costs less than $50 — can

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detect and eliminate incoming viruses. Most antivirus software companies also provide free updates that you can download from their Website that identify and remove recently spawned viruses.

## Financial Management

Online bill management service providers offer small businesses a simple way to receive, monitor, and pay incoming invoices. When users sign up for the service, they receive a unique post-office box that serves as their billing address. For a small monthly fee, the service provider receives incoming bills, scans them into its system at its processing center, and sends an e-mail notifying the user that the bill has arrived. Users then log into the secure bill-management system, examine a scanned copy of their bill, select the date and amount of their payment, and let the service provider handle the rest. Some services also allow users to download their transactions directly into their accounting software.

Additionally, many banks offer online financial services for their small business customers. Some institutions feature systems that enable users to access their bank accounts and financial services, synchronize their financial data with their accounting software, and pay their invoices online.

Finally, small businesses that receive credit-card orders over the phone or through the mail can process payments online through a virtual credit-card terminal. Merchants manually enter credit-card transactions over a secure Internet connection via an interface that resembles the point-of-sale devices used by retailers. The cost for a virtual credit-card terminal usually consists of a fixed monthly fee plus a small percentage of each sale.

## Virtual Fax

Virtual fax services deliver incoming faxes to their recipients via e-mail. Users receive their own unique fax number when they sign up for the service, and they can add additional services — such as multiple fax numbers and enhanced fax-sending capabilities — for an extra monthly fee. In most cases, users need to download special software to view or print their faxes.

These services offer many conveniences. Because incoming faxes arrive as e-mail attachments, users can retrieve them from any computer with Internet access. Incoming faxes don't tie up phone lines during business hours, which can be an important concern for small offices. Most services also enable users to send faxes from practically any other software application on their computer. Plus, these services are affordable — monthly fees rarely exceed $15 for a single account, and some companies provide free virtual fax service for users who don't mind having a fax number with a far-away area code.

For those who don't trust a third party with their faxes, a number of inexpensive software applications will add fax capabilities to your PC. As long as your computer has a fax-ready modem, which is standard on most of today's store-bought systems, you can send and receive faxes right from your desktop with ease.

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