Share and Share Alike: Setting Up a File Server

by Joe Stoddard

Computers are cheaper than ever, which means contractors can afford one for each hand, some for their employees, and a couple of spares. That's the good news. The bad news is that multiple computers equal multiple Excedrin headaches when it comes to file and document management. Ask anyone who has wasted a day or two working on the wrong version of a set of CAD plans or has mailed a customer a detailed quote based on last year's prices.

Luckily, more and more of you are using broadband Internet access and setting up networks so you can share the connection. That opens the door for the next logical step — setting up a "file server."

Grand Central Station

The concept is simple: Instead of letting everyone in your company have copies of your project files riding around on their individual computers, you set up a small office network, and then you create one centralized "place" (the file server) where all your data is stored. No one in your office will save files to their local hard drives anymore. Instead, they'll open files from the file server, work on them as always, and save them back to the same place they found them.

If you have mobile users with laptops, or want to open "work" files from your home office, you'll connect to the file server from the Internet and then use one of several "synchronization" software packages to make sure you're working on the most current version of your file. When you're done, you'll reconnect, and synchronize the updated files back to the file server, where they'll be waiting for the next user.

In addition to eliminating "file version" mistakes, having all your information in one central spot makes it much easier to perform regular backups and routine housekeeping on your data.

Hardware Requirements

Before you can use a file server, you need a small office network. I'm not going to get into the details of setting up a network here, except to say that it's gotten much easier (and cheaper) than ever before. Check out my recent column on data routers (*Computers*, 2/03). One of the full-featured models discussed can serve as a network hub, a gateway to the Internet, a security firewall, and even a wireless access point all rolled into one device. Given a basic knowledge of Windows or MacOS, you should be able to network several computers together and provide them with shared Internet access for a few hundred dollars (see Figure 1).

Once you have a functioning small office network, you can set up your file server. You have several hardware choices, each with advantages and disadvantages.

Underutilized desktop computer. Say you have a desktop computer that's used only once in a while, for instance by a part-time bookkeeper. As long as it has enough free hard drive space (or can be easily upgraded) to store all your project files, it can be used as your file server. Because of the inevitable crashes and possible data loss, it's bad business to have someone regularly running programs and doing work on a computer that you're using for a file server. But if you're a small company and it's not a regular occurrence, you can get away with it. Price: $0 and up, depending on necessary upgrades and modifications.

Dedicated PC-based server. This is the most versatile option and, surprisingly enough, not terribly expensive. Checking out Dell's website (www.dell.com) recently, I found the 600SC mini-tower server selling for $399 (without operating system, keyboard, or monitor). A dedicated server not only can handle serving files to your network, but also can double as a print server (for sharing a printer) and even run applications like in-house e-mail and remote access/synchronization software. If you're willing to spend a little more, PC servers can be

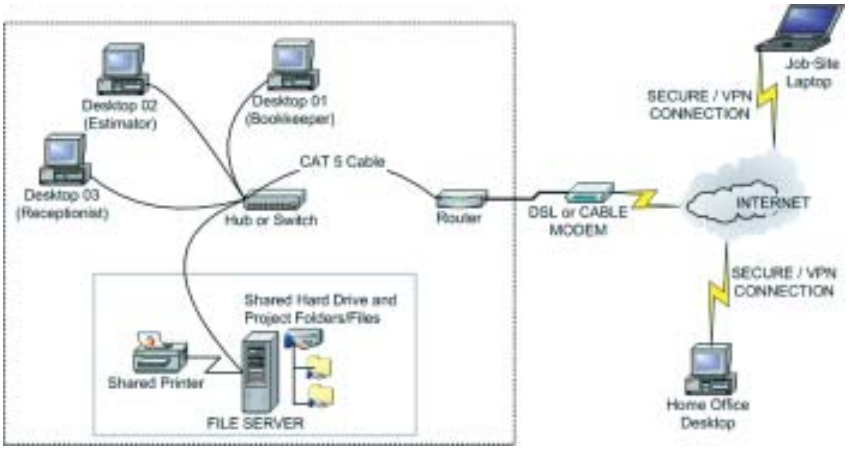

Figure 1. Whether your users are "in house" or connecting from a home office or the job site, a file server attached to your small office network creates a centralized place to store and back up your project data.

purchased with backup power supplies, multiple hard drives, and dual network cards for extra reliability. They can also accommodate advanced backup devices like tape autoloaders.

Dedicated servers can be set up to run a familiar Windows operating system, or you could save some money and install one of the many free or cheap "open source" UNIX derivatives like Linux (www.linux.org) or FreeBSD (www.freebsd.org), both of which will work for Windows or Mac file sharing.

Figure 2. The Linksys EFG80 combines up to 240GB (80GB standard) of file storage with a built-in print server and security and backup utilities, giving it a lot of bang for the buck for small office networks.

Network "server appliance." This third category of file server, also called network attached storage, or NAS, is gaining popularity because it's relatively inexpensive and is dog-simple to get set up on your network — just plug in to your network hub and configure using a web browser on one of your other computers. There's not much more to think about. Typically, a NAS appliance will be a semi-sealed box containing one or more hard drives and running a very scaled-back operating system — just enough software to read and write files to the hard drives and maybe some security or backup utilities.

One well-known brand of NAS is the Snap server (www.snapappliance.com), with new models showing up from Linksys (www.linksys.com), Iomega (www.iomega.com), and others (Figure 2). Prices start around $500 street.

If there's a downside to NAS servers, it's that they're pretty much one-trick ponies. While some have basic print-sharing capability, you can't install or run applications from them like you can from a PC-based server.

So go out and get your file server. Next time around, we're going to look at several ways to use it to make sure your project documents are always up to date and in sync.

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