

Looking at the Benefits of Cloud Computing

Cloud computing is a different — and, in many ways, better — approach to networking. Here are a few of the main benefits of moving to cloud-based networking:

» **Cost-effective:** Cloud-based computing typically is less expensive than traditional computing. Consider a typical file server application: To implement a file server, first you must purchase a file server computer with enough disk space to accommodate your users' needs, which amounts to 1TB of disk storage. You want the most reliable data storage possible, so you purchase a server-quality computer and fully redundant disk drives. For the sake of this discussion, figure that the total price of the server — including its disk drive, the operating system license, and the labor cost of setting it up — is about \$10,000. Assuming that the server will last for four years, that totals about \$2,500 per year.

If you instead acquire your disk storage from a cloud-based file sharing service, you can expect to pay about one fourth of that amount for an equivalent amount of storage.

The same economies apply to most other cloud-based solutions. Cloud-based email solutions, for example, typically cost around \$5 per month per user — well less than the cost of setting up and maintaining an on-premises Microsoft Exchange Server.

» **Scalable:** So what happens if you guess wrong about the storage requirements of your file server, and your users end up needing 20TB instead of just 10TB? With a traditional file server, you must purchase additional disk drives to accommodate the extra space. Sooner than you want, you'll run out of capacity in the server's cabinet. Then you'll have to purchase an external storage cabinet. Eventually, you'll fill that up, too.

Now suppose that after you expand your server capacity to 20TB, your users' needs contract back to just 10TB. Unfortunately, you can't return disk drives for a refund.

With cloud computing, you pay only for the capacity you're actually using, and you can add capacity whenever you need it. In the file server example, you can write as much data as you need to the cloud storage. Each month, you're billed according to your actual usage. Thus, you don't have to purchase and install additional disk drives to add storage capacity.

» **Reliable:** Especially for smaller businesses, cloud services are much more reliable than in-house services. Just a week before I wrote this chapter, the tape drive that a friend uses to back up his company's data failed. As a result, he was



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