



## How Dangerous Is Cloud-Based File Storage?

ALTHOUGH LARGE BUSINESSES HAVEN'T YET ADOPTED CLOUD-BASED STORAGE, MANY SMALL- AND MEDIUM-SIZE BUSINESSES HAVE FOUND THE ADVANTAGES OF SERVICES SUCH AS MICROSOFT ONEDRIVE, DROPBOX, OR GOOGLE DRIVE TOO TEMPTING TO PASS UP. BUT THERE ARE DANGERS, TOO.

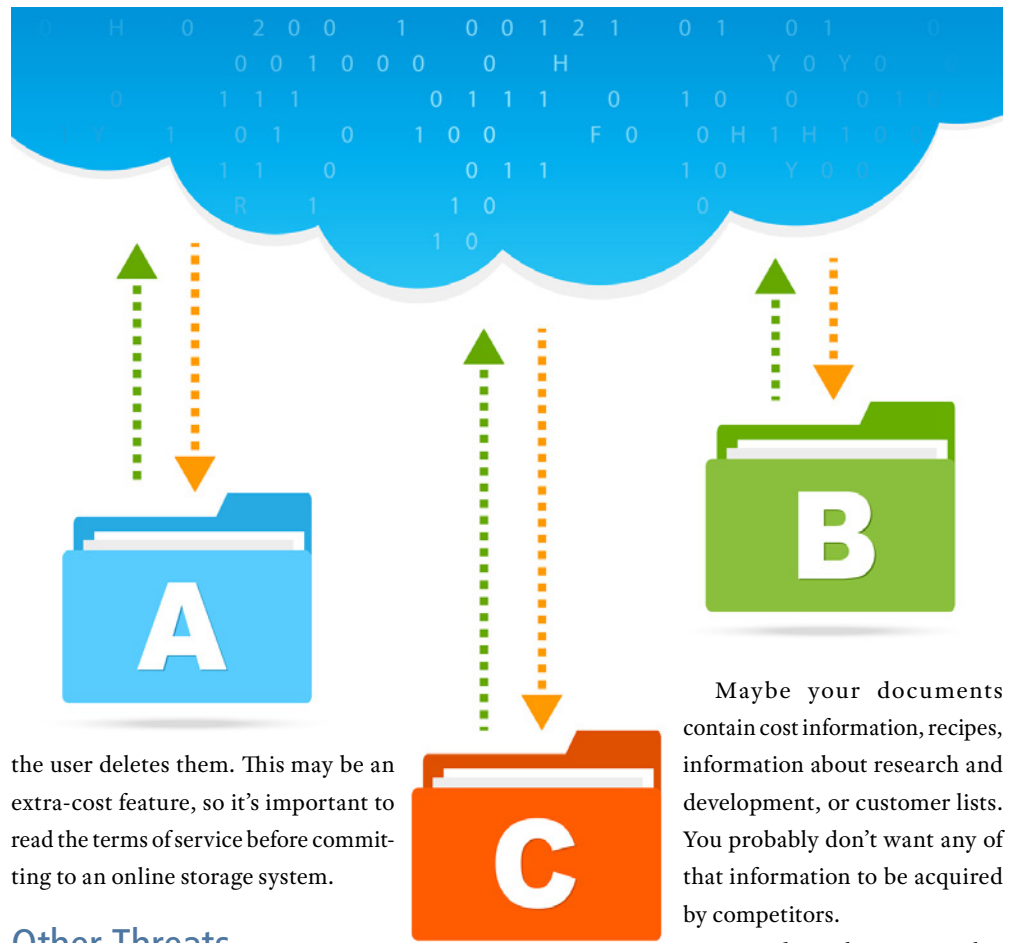
There's no question that online file storage is handy. Documents that you place in one of the file-storage services are readily available wherever there's an Internet connection. The ability to collaborate with co-workers who are in far-flung locations gives small companies some of the same advantages that giant corporations have with their widespread corporate networks.

But occasionally we hear about people like Northeastern University Professor Dr. Heidi Kevoe-Feldman, whose story was reported in *Business Insider*. The professor had students upload papers to Dropbox. She used the service to store her research files. And, astonishingly, she was working on a collaborative project for which the only copies of the files were on Dropbox.

Suddenly, everything was gone. Except for the collaborative project, the files had been synced to two of Professor Kevoe-Feldman's computers. Those copies were gone, too. *Synchronization* means just what it says. If a file is deleted from one location, it will be deleted from other locations.

Fortunately for the professor, her Apple computer's *Time Machine* process had backed up copies of the files and they were still available. In all, more than 100 gigabytes of deleted files were recovered. But she made the mistake that a lot of people make in assuming that storing files online was simply an extra security measure, and it would have been except for that *synchronize* feature.

Most of the online storage services keep copies of deleted files for some period (often 30 days) after



the user deletes them. This may be an extra-cost feature, so it's important to read the terms of service before committing to an online storage system.

### Other Threats

FILE DELETION IS JUST ONE THREAT AND PROBABLY NOT EVEN THE MOST LIKELY THREAT. CONSIDER THE INFORMATION YOU'RE STORING ON SOMEBODY ELSE'S SERVER. IS THE INFORMATION PROPRIETARY?

Maybe your documents contain cost information, recipes, information about research and development, or customer lists. You probably don't want any of that information to be acquired by competitors.

Yes, industrial espionage is big business and if you're protecting your confidential data with an easily guessed identity and a weak password, you might as well create a public website and post the information there.

At the very least, you need to create an identity that isn't associated with your company. The

Smith Company, for example, would be wise not to choose the identity “smithco” for its online data store. Maybe walrusutah (an animal and a state name) would work. In fact, having multiple areas might not be a bad idea so that if one area is compromised the others will remain safe.

I’ve written about passwords previously and you can review those issues online ([www.blinn.com/archive.html](http://www.blinn.com/archive.html)). Those who access your files online should be required to have strong passwords, preferably 15 characters or more in length and created by a password generator such as OnePass, LastPass, or KeePass.

Some services can provide 2-factor validation, which requires both a password and an out-of-channel response at logon time. The out-of-channel prompt and response often involve a cell phone, with the service sending a random number to the user’s known cell phone. The user then needs to enter that number before being granted access.

Most online storage services have applications that make the remote location appear as a directory on your computer. Microsoft’s One Cloud does the best job, at least with Windows computers and particularly if your users are enrolled in Microsoft’s Office 365 program, but all of the big services have some method that provides easy access to files. Additionally, all of them offer Web-based access for times when you’re using a computer that doesn’t have the service’s application installed.

Using the Web-based access requires a browser. To ensure the security of your user name, always use the HTTPS protocol instead of HTTP. The larger providers of online services will switch your connection to HTTPS even if you forget, but don’t assume that this is always the case. Using HTTPS is important because it ensures that your user name, password, and data will be sent via an encrypted connection.

Safety and security are never assured, but taking common-sense precautions such as these will keep the odds in your favor.

## The Big Four

IF YOU’RE THINKING ABOUT ONLINE STORAGE, THE PRIMARY OPTIONS ARE BOX, DROPBOX, GOOGLE DRIVE, AND MICROSOFT’S RECENTLY RENAMED ONEDRIVE.

Each of these offers some storage for free and for those of us who want to keep just a small number of files in a location where they’re always available may find that the free storage is all we need.

Free storage ranges from a low of 2GB at Dropbox to 15GB at Google. In between, Microsoft offers 7GB and Box provides 10GB. All of them have paid services when you’ve outgrown the free offerings.

### Google Drive (15GB free)

This used to be called Google Docs, but it’s been expanded beyond the basic word processor, spreadsheet, and presentation applications. Google provides 15GB of free disk space to use for anything you want to store. G-Mail files count against the limit and to use the space you need a Google account.

Files are accessible from the Google Drive website, but PC and Mac owners will probably want to download the application that allows you to access the files more directly and synchronize them so that the Web-based version is always the most current copy of the file. The app isn’t quite as slick as Microsoft’s OneDrive, at least with Windows 8 computers, but it works well.

If you have a Chrome notebook computer, Drive is built in and if you have an Apple or Android hand-held device, there are apps available for accessing your files.

If you need more storage, Google charges \$5 per month for each 100GB.

### Microsoft OneDrive (7GB free)

Last year I purchased extra space from Microsoft, but I recently allowed it to expire because I found that 7GB was sufficient for what I had online. One of the primary advantages of OneDrive is that it appears in the Windows Explorer as a file folder under Windows 8. There’s also an app for Mac users and anyone can use the Web-based tools to access files.

If you have an Office 365 subscription plan or use an application such as OneNote, Microsoft OneDrive is a perfect fit. Changes to documents are reflected in the online copies as you make them and this allows real-time collaboration.

You’ll need to sign up for a Microsoft account, which also provides access to the Microsoft’s Outlook e-mail service (formerly Hotmail), Xbox

Live, and other Microsoft services. Additionally, it’s what you’ll use to sign on to your Windows 8 computer and to synchronize certain operating system functions among all of your computers.

If you need more space, 50GB costs \$25 per year.

### Dropbox (2GB free)

Dropbox is the name that everybody knows when it comes to online storage. It’s easy to use and available for just about every operating system and device. You can use the Web interface or download an app for most systems.

Although the service provides only 2GB of free storage, you can obtain an extra 250MB by viewing a tutorial on how to use Dropbox and if you activate automatic photo upload from a mobile device, you’ll get an extra 3GB. Referring friends to Dropbox will earn an extra 500MB for each person who signs up (16GB total).

If you need more space and don’t want to play the games needed to obtain it, 100GB costs \$10 per month.

### Box (10GB free)

Box is actually intended more for work-groups in a corporate environment. It excels in providing collaboration tools and allowing file owners to share files with others in the group while restricting what others can do with the files. For individual users, it might represent too many choices.

Users can connect their Box account with other applications such as NetSuite, Adobe Lightroom, Salesforce, and Microsoft Office.

Apps are available for Windows and Mac computers as well as Apple and Android devices.

If you need more space, each 100GB costs \$10 per month or \$45 per month for 1TB of space.

Online storage is convenient and easy to set up. If you’re cautious and follow good security procedures, it can also be safe. Ω

