



## **Mirrored Storage, Inc.**

### **Ten Questions to Ask Your Online Backup Provider**

White Paper presented by:

**Mirrored Storage, Inc.**

**ONLINE BACKUP SOFTWARE**

<http://MirroredStorage.com>

#### **Introduction**

There are many online data backup vendors available on the internet. However, not all providers were created equal. Many offer robust, sophisticated backup tools suitable for protecting vital business or personal data from disaster. Unfortunately, there are also a large number of lower cost solutions where important corners have been cut or features skipped in favor of economy. Before you trust an online backup service with your critical personal data, it is important to understand what features are available and how important these are to you.

These are hard questions to ask yourself if you are looking for an online storage vendor and ask your existing one if you already have one. If you have not looked at your service contract with your existing vendor you need to get a copy and read it. Almost all of them have "gotcha clauses", we do not. You have a need to excessive amount of data or to be backed up we will find a way to work with you. No extra charges for data per upload or download, another hidden issue with the low cost vendors.

The amount of data used by today's businesses has increased exponentially from just five years ago. Corporate scandal, international unrest, and glaring security flaws in computer operating systems and software applications have resulted in a much more intense and detailed analysis of data as it enters and leaves the enterprise. Fortune 500 companies have been vilified in the press for reckless data stewardship, and in some cases of outright fabrication of financial and performance reports. In extreme cases, executives are now lounging in Federal facilities, denying to the bitter end that they had any knowledge of the blatant misrepresentation for which they were held accountable. The private information stores of several prestigious organizations, some of them very sensitive and personal in nature, have been lost, misplaced, or accessed by hackers – the details of the events becoming fodder for an indignant news media.

## 1) How secure is my data?

*Does your backup provider use encryption when they store your data?*

Even though most services use encryption to protect your data as it traverses the Internet, many do not use encryption when they store your data on their servers. In fact some even state in their terms of service that encrypting your data is not allowed. They are banking on the fact that many people will store the same files, so they don't want to back up a file more than once. If someone else needs that file, they could be giving them access to one of your files instead.

This may be fine if you're just saving MP3 music files, but wouldn't you prefer your personal information (like banking records or emails) be kept secure?

**Mirrored Storage** Appliance offers an extensive list of encryption standards including:

- DES (8.2 Compatible)
- DES (8.3 Standard)
- TDES (Triple-DES)
- Blowfish (Variable-Key)
- AES 128-bit
- AES 192-bit
- AES 256-bit

**Mirrored Storage** allows you to use various Encryption Standards. Depending on the country you are in and the version of **Mirrored Storage** you will have some or all of these available.

- DES is the old US Federal Standard
- TDES is a much more secure form of DES
- Blowfish is probably the most secure of all. It uses a key length that is variable from four bits to 448 bits.
- AES is the new US Federal Standard. We support three levels of AES from 128 bits to 256 bits. 256 bit AES is very secure, but it is also slow.

Each file is encrypted before it leaves the appliance using your choice of the methods listed above (i.e. your personal online banking application only uses 128 bit). Your data assets travel safely encrypted over the Internet and is stored on the **Mirrored Storage** servers as a bunch of numbered files containing encrypted data. Your encryption key is unique to you and we don't know or have access to. Only you have the ability to access your data. This also meets all the existing regulatory compliance programs including but not limited to HIPAA, GLBA, SOX & PCI.

## 2) Is the service easy to get working?

*Do you need to hire an IT consultant to install and maintain your backup software?*

Most online backup tools were designed to be used by expert IT administrators. Many of these services require intimate knowledge of Windows in order to make a backup. For example, did you know that your Microsoft Outlook email file is kept in a special hidden folder 6 levels deep in your PC? If you don't, you may have a lot of trouble backing it up.

**Mirrored Storage** Appliance was designed to work from an appliance so no special knowledge is needed. We work with you to help get started and work with you over time. With our management help you have nothing to worry about. We will help you determine the folders, files, and file types you want backed up and the type and frequency. If you have a large amount of data to backup for the initial load our Appliance can do that initial backup and then stream it to your remote servers. No need to take days or weeks to get your data backed up or external devices or mailing back and forth involved. From there you can easily add or remove other folders if you wish from the appliance.

### **3) Is my backed up data assets really safe?**

*Does your online backup service have remote backup services for your assets that protect them in case they have a disaster?*

*Many of the low cost providers provide you a single copy of your information assets. What happens to them if they have a failure issue?*

Many of the low cost providers don't monitor your backups and if you have a problem such as missed backup due to a drive or machine not mapped properly you are on your own. "You should have been checking you logs". Result, you are no better off than using no service at all.

**Mirrored Storage** Appliance utilizes a mirroring technology to keep your information safe at an alternative locations. The result is that your information assets are not only on your specific device but can be stored on the appliance and are kept on the **Mirrored Storage** Server and the Mirrored Server. That guarantees your organization three and possibly four copies of protection.

### **4) Does it store multiple versions?**

*Does your online backup service keep multiple versions of files?*

To keep storage costs down, a lot of backup services keep only one copy of each file. This may seem fine to you, but what would happen if some of your critical files get corrupted by a virus and you do not notice until after your next backup? Could it be that your online backup provider is keeping perfectly preserved copies of your corrupted files? This could be an issue when it comes time to recover.

**Mirrored Storage** keeps multiple versions of your files. If a file gets corrupted, or if you just need an earlier version of a file, you simply go online and download whichever version of the file you need.

### **5) Does it backup changes or just whole files?**

*Does your backup tool backup the whole file every time it changes?*

Backup services without versioning features need to back up the whole file each time it changes. This is not so bad for smaller files like Word documents. But backing up your whole mail file every time you get new mail is unworkable. If your mail file is 500MB, it could take hours to back up just that one file. If you get just one new email message, contacts, tasks and calendar events will you have to start all over?

Once you have a file backed up once, the software will detect and extract only the data that changes for backup. If you have a 500MB email file and get 2MB of new mail only needs to back up the 2MB that changed. That backup can happen in a matter of seconds. These changes are stored by [Mirrored Storage](#) as different versions. This is why you can recover so many earlier versions of your files without taking up a lot of extra storage. [Mirrored Storage Appliance](#) uses a patented technology called BitBackup to accomplish the backup and restore of files.

## 6) What happens if the backup gets interrupted?

*What happens if your internet connection drops or you unplug your laptop?*

Many online backup tools work just like old tape backup software. They look for all the files that need to be backed up, and then transfer everything as one huge blob of data. The problem is that most Internet connections aren't actually all that good at transferring huge blobs of data. If your connection gets interrupted (even if just a blip) many backups will fail and you will have to start over. If they fail, they will probably fail when they are 90% of the way through that 500MB mail file.

[MirroredStorage.com](#) is designed to be interruptible. If your connection gets interrupted, the backup will simply pause until the connection comes back. Then it will continue your backup from where it left off. This includes situations like you rebooting your laptop and taking it home for the evening. It picks up where it left off once you are logged back on and into the network.

## 7) Will you delete my files without asking?

*Does your backup service delete your files for you?*

Some backup services try to keep costs down by automatically deleting files that are no longer on your PC. From a cost perspective this is nice, but accidental deletion (human error) is one of the biggest reasons why people lose files. Some studies have shown that this is the reason for loss at 11% of the time.

[Mirrored Storage](#) will never delete your files automatically. If you delete a file by mistake, rest assured that it will still be in your account. This is what a reliable backup is for.

Instead, with [Mirrored Storage](#) we save all the versions, within service agreement, until you delete them from our server. No accidental deleted file.

## 8) Can you back up multiple PCs, servers, or networks?

*Does your backup service charge you again and again for every machine you back up?*

Most online backup plans are based on a single PC. If they say you can back up your PC for \$10/month, they really mean you can back up that one PC for \$10/month. If you want to back up more PCs, that will cost another \$10 each. What seemed like a good deal for \$10 is often less interesting when it becomes \$50. Also when looking at the "fine details" and it says things like "... we reserve the right to monitor our

system to identify excessive consumption of network resources ... your usage greatly exceeds the average level of monthly usage ... we reserve the right to offer an alternative pricing plan ...". Many also put restrictions the types of devices you can back up. They may require a more expensive plan for a server, or they may not allow you to back up network shares or external hard drives.

**Mirrored Storage** Remote Backup is installed on the appliance. We will help you add as many users as you like. You can back PCs, laptops, Macs, servers (Windows, Unix, Lynx and AS400/iSeries), hard disks (even external), network drives, even external drives, USB memory keys (Thumb drive) & iPods, iPhone, thumb drives, SmartPhone devices and databases (while open or locked) can be backed up on the schedule and type of your choice. In all cases you pay for what you use. No extra charges like many other offerings for uploads, downloads, storage or versioning.

### **9) Is the rate plan excessively complex?**

*Does your backup service require you to buy more storage than you need?  
Then what happens if you exceed your storage plan?*

Most online backup plans are based on set "buckets" or storage. If you pay \$10/month you can perhaps store up to 1GB. When you try to back up 1.001GB, the backup will fail and you will have to either delete some data or upgrade your plan. To upgrade your storage plan, some services even require you to download and reinstall new software. Usually this happens just before a big disaster. If you have more than one PC this gets even worse. You need to figure out how much storage each PC needs and manage each plan separately. Each time a PC fills up its plan, you will have to go through this process again.

With **Mirrored Storage** you are charged based on how much storage you actually use on all computers, servers and storage devices. You only pay for what you actually use.

### **10) Will I be able to access my data remotely?**

*How easy is it to access my data?*

Some of the lower cost services will only allow you to access your files from the PC that backed them up. To transfer them to another computer usually requires that you sign up the new PC for separate plan.

With **Mirrored Storage** Appliance you can backup and restore software on as many computers as you like. The appliance is the hub and there are no additional charges to restore, all you need is your security key that you created when setting up the appliance.

## **Acknowledgements and Sources:**

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