



Affordable and Reliable Online Backup—Can You Afford Not To?

Tape backups, while inexpensive, have reliability, security, and convenience drawbacks, while high-availability solutions may require a greater investment than most SMBs want.

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With businesses so reliant on computers today, backup has become a common and rapidly growing requirement. Originally, backup needs stemmed from continually crashing computers, bugs in software programs, and system failures due to power outages. In recent years, technology has become more reliable, but businesses have experienced devastating events—such as September 11 and Hurricane Katrina—that have made them rethink their backup strategies.

As a result of these manmade and natural disasters, as well as other fraudulent acts such as identity theft and the spread of computer viruses, federal, state, and local government agencies have stepped in to protect businesses and consumers and have developed regulations to ensure business continuity. These mandates are not only designed to protect business and consumer data, but also to ensure that the businesses can recover their data in a timely manner. It doesn't help a business or its customers to have all of its data backed up in a secure offsite facility if they don't have immediate, 100 percent accessibility.

The Sarbanes-Oxley Act (SOX) is one of the most notable regulations that have been developed in recent years. This act requires companies to have systems in place that securely, accurately, and reliably manage and report corporate financial data. Additionally, the Healthcare Insurance Portability and Accountability Act (HIPAA), which focuses on securing patient information, and the Gramm-Leach-Bliley Act, which deals with the protection of non-public personal information, have required companies to put plans in place that address data privacy and security concerns as well as retain company and customer data. Compliance with these laws is meant to protect a company, its customers, and its management.

Many believe that these data privacy regulations apply only to public companies, but private companies are also being held accountable. Even if your business does not have to comply with any specific regulations, not protecting your data properly can negatively affect your business in many ways, including your bottom line, your legal standing, and your reputation with key company stakeholders (i.e., customers, partners, and employees).

Data Protection and Availability Challenges for the SMB

No matter the size or type of company, all businesses need a backup and recovery

strategy for their key application systems. Like other platforms, iSeries users run the risk of unavailable applications and data due to system failures—whether they are IT-related or caused by a manmade or natural disaster. Today, iSeries users are primarily relying on dedicated tape technology or high availability systems to protect their critical applications.

Although more and more users are turning to 24x7 replication solutions, a majority of iSeries users don't have 24x7 availability requirements. They do, however, have business continuity needs, requiring their systems to be up and running in less than 24 hours following a system failure.

The Turmoil with Tape

Tape technology is still widely used and has improved dramatically, but it doesn't provide companies with the immediate access to their systems in order to meet a 24-hour recovery time objective.

With tapes being physically located at an offsite storage center, IT professionals must perform backups of their systems and send them to that offsite storage center. This is a time-intensive process in itself. But, actually, retrieving the data is potentially daunting. The company must first go to the center to retrieve the tapes or have the facility find the tapes and deliver them back to the company. And, because tape backups are usually done on an incremental process, it is often difficult to determine on which tape the needed data has been stored, significantly slowing down the recovery time.

If a disaster occurs immediately following an incremental backup, which is usually scheduled during the middle of the night, the chance of the company's losing up to 24 hours worth of work is highly probable. Data loss may also occur due to the lack of dependability of backup tapes. Media can become corrupt or damaged. According to the [Gartner Group](#), 34 percent of companies fail to test their tape backups, and of those that do, 77 percent have found tape backup failures.

With tape also come security concerns. With the manual delivery and retrieval processes of tape backup, tapes can be lost or stolen. Think about what would happen if a backup tape that has personal data on it gets stolen. We've heard many stories of this happening at major financial corporations. These companies then not only need to address the immediate concerns of their customers and other stakeholders, but also find themselves in a public relations nightmare.

The High-End Option

With the challenges presented by tape technology and the need for immediate access to their data, many businesses are moving to high-availability solutions. This approach leverages the speed and agility of the Internet to protect your data. Companies using high-availability solutions typically pay a monthly subscription fee for a "mirror" to be created of their mission-critical systems and data. If a disaster occurs, the company will be able to access a replicated version of its IT environment within a desired recovery time.

There is a very large gap between traditional tape backup/recovery and high

availability. Tape recovery will take more than 24 hours, assuming there is reasonable access to available systems. High availability offers immediate failover and zero data loss, if a business has that particular requirement.

Backing up via tape has always been a more cost-effective approach, however, that is changing as the costs of disks decrease. For a high-availability solution, there is an initial capital outlay for a duplicate target iSeries server, high-availability software, and the cost to implement the solution. Additionally, high-availability solutions usually require user certification and training to ensure they are used and managed properly. For replication purposes, the company must also own and maintain duplicate systems, further increasing the costs associated with this sophisticated approach to data protection and recovery.

A More Practical Model

Managed availability services that offer high-availability software, iSeries capacity, managed SSL and firewall services, and technical support can provide the protection and restoration capabilities needed for today's fast-paced businesses. This subscription-based model can provide companies with a 24x7 data protection and availability "utility" and guaranteed switch readiness in a service level agreement (SLA).

Tape solutions are often cumbersome, slow, and unreliable. High-availability solutions come with a price tag that isn't an option for every company and may offer more capabilities than some businesses need. Electronic vaulting solutions are becoming the more popular option, meeting companies in the middle.

Electronic vaulting uses the Internet to perform disk-to-disk backup. Like high availability solutions, there are no tapes to transport or store, and data is encrypted and automatically transferred to an offsite data center, where files can be easily accessed through a standard Web browser. Once the company's data is transferred over the vaulting technology, it then regularly identifies and backs up only incremental changes to the data, making it a much more efficient process.

As stated earlier, the information being backed up is virtually worthless if there is no way to restore and use it. Solutions that perform disk-to-disk restoration of data to standby servers enable a business to be operational much more quickly than traditional methods. They offer LAN-speed restores from standby iSeries systems or LPARs, and users then gain access through managed VPN services. With vaulting services, a typical recovery is completed in less than 10 hours. Although a high-availability solution will provide quicker access to data, there is no capital outlay required with electronic vaulting, and it is easy to set up and use.

Why Companies May Be Reluctant

Some businesses have been wary of moving to an online backup solution for a variety of reasons. For some it is a control issue. If you give your data to someone else, what happens if that vendor goes out of business or has a dishonest employee who has access to your company's data? Most vendors provide safeguards for these potential threats. They offer encrypted solutions that are password-protected and are stored and transferred in write-once-read-many (WORM) formats to comply with

government and industry mandates. They also conduct thorough background checks on all of their employees.

Another reason is the misconception of the length of time it takes to move data over a network line. Companies can actually use their existing Internet connections and still transfer their data in a reasonable amount of time and without interruptions to their normal business operations. There is no need for a company to purchase a dedicated T1 line for an online backup solution. The data can be backed up while the system is still active, and users will have access to all their files during the transfer process.

And finally, some companies have not moved from their ritual tape backups to online methods because of the cost issue. However, a firm of any size can benefit from electronic vaulting. The risks of losing valuable data far outweigh the costs of implementing a system that both protects your data and restores it for quick and easy access if a system fails.

Cost and Productivity Improvements

Living in the information age, companies cannot afford to take risks with their data. Companies need to step back and carefully evaluate their business continuity needs. How long can they function without their critical applications and data? They must ensure they are in compliance with appropriate government and industry regulations.

By eliminating the tape hardware costs and improving productivity with faster backup and recovery processes, companies may realize significant cost and productivity improvements—not to mention eliminating significant risk. And, by the automatic nature of electronic vaulting that eliminates manual tape backup, management, and recovery tasks, electronic vaulting becomes the preferred option for most small-to-midsized businesses.

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