

White Paper

## Cloud-Connected Means Faster Backup, More Reliable Recovery

### **DISK-O-TAPE, INC.**

#### **cloud-con-nect-ed stor-age so-lu-tion (compound noun)**

Next-generation data protection that backs up your data onsite for fast, local backups and restores, and replicates another copy to the cloud for offsite data protection. It's the best way to protect data in a distributed environment.

#### **Blend the Best Capabilities of Cloud and Onsite Data Protection**

It's not an easy time to be tasked with protecting corporate information. First, your organization is probably generating enormous amounts of new data. At the same time, user demands and service-level expectations are rising. IT environments are becoming more complex: they commonly comprise multiple sites around the world—each running its own blend of hardware, applications, and databases, as well as distinct business processes. Government and industry overseers devise and enforce regulations mandating information integrity and access. And data-damaging disasters and outages are an ever-present threat.

The challenges are clear. Is the solution?

An elemental, evolutionary leap in backup and recovery is underway. It promises shorter backup windows and faster recovery times, and the confidence that no matter where data is stored, it is totally secure and can be recovered when you need it.

It's the cloud—connected to your organization.

This white paper explores how cloud-connected™ backup and recovery offerings are helping customers thrive in today's rapidly evolving data protection environment.

#### **Welcome to the Cloud: How Did We Get Here?**

For many years, companies backed up their information to magnetic tapes, which were trucked to a remote location for safekeeping. Unfortunately, the technology lacked data deduplication and compression, the backup process was laborious, and recoveries were slow.

Next came disk-to-disk backup, which sends your data to another disk instead of tape. Disk-based solutions often have built-in data deduplication and security. They are a much faster, more efficient, and more secure foundation for backup and recovery. But disk-to-disk data protection increases your expenses, especially the capital investment for hardware, software, and storage.

Newer disk-to-cloud backup and recovery models turn your capital expenses into a monthly operating expense that typically covers the cost of the hardware, storage, software, power, and data center bandwidth. Disk-to-cloud gives you all the efficiencies and security of disk-

to-disk with the added benefit of offloading much of the operational burden of maintenance to your cloud services provider. The service provider manages the infrastructure, proactively monitoring it to optimize performance and seamlessly scaling it for you as needed. Because your data is automatically transferred offsite, human errors introduced in a trucked-tape scenario are eliminated. Moreover, your data doesn't just get moved off premises; it is usually moved out of the region to protect it from natural disasters.

Increased reliability, easier management, reduced expenses—how can you go wrong with a cloud service? You can if bandwidth is limited. As your data grows, a small pipe can make it hard to transfer data offsite within your backup window, much less recover it in time to meet your Recovery Time Objectives (RTOs). This is where a cloud-connected solution really helps.

### A New Paradigm for Data Protection: Cloud-Connected

Cloud-connected data protection keeps a copy of your data onsite so that you can back up and recover data over your LAN. It also puts a copy of the data in the cloud—your private cloud or a public cloud—for offsite disaster protection. The goal is to combine the best of onsite and cloud data protection to get the right balance of reliability, performance, and affordability.

- **Onsite**—You manage all the hardware and software you need under your roof. Preconfigured, all-in-one appliances are available to simplify deployment and maintenance. You can choose to maintain your infrastructure with your own team or outsource this responsibility to a certified local provider.
- **Cloud**—Your data is protected in a secure data center. All hardware and software is managed for you. Required storage and power is automatically provisioned and scaled out to meet your deployment needs. Protecting your data in the cloud gives you the inherent benefit of offsite disaster recovery. Cloud data protection makes life as simple as possible for your IT team while still ensuring your data is safe and easily accessible.

However, cloud-connected performance benefits are not achieved by proximity alone. Because a healthy network enables IT to deliver consistent service levels that keep a business running smoothly, the “secret sauce” of a cloud-connected solution is its data transfer technology.

A WAN-optimized solution cuts network congestion using three key techniques.

- **Deduplication:** The data deduplication process identifies unique data segments within a given set of information and then eliminates redundancies. The process can be applied before any data is transferred off the source system, or after it has reached its target. Data can be coarsely deduplicated at the file level or with much finer granularity at the block level.
- **Compression:** The size of a data set can be dramatically reduced by eliminating its “white space.” In fact, data stored by certain operating systems can be compressed by as much as 90 percent of its original footprint without losing critical information. Consider using adaptive compression—an algorithm that balances bandwidth availability with the burden compression places on the system's CPU.
- **Bandwidth throttling:** By regulating the amount of network traffic introduced by the solution, bandwidth throttling ensures the data protection solution does not interfere with the network's service quality. Throttling activity can usually be adjusted throughout the day to minimize disruption during business hours and maximize the use of the network in off hours.

WAN-optimized data transfer can help you achieve two goals eluding many IT organizations today: backups that fit within an assigned window, and recovery that's fast enough to meet your RTOs.

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### Top Five Attributes to Consider When Selecting a Cloud-Connected Solution

1. Data security—in transit and at rest in the cloud
2. Data transfer efficiency—during backup and offsite replication
3. Recovery procedures—from onsite and cloud locations
4. Storage footprint management—onsite and cloud locations
5. Resources consumed by the onsite copy of your backup data

### The Right Kind of Cloud

When considering data protection solutions for your multisite environment, focus on keeping your data safe. When it comes to security, not every vendor's cloud implementation is terrific. A state-of-the-art cloud will ensure your data is always encrypted, and that only you own the encryption key. The cloud's data center network will have built-in threat detection and intrusion prevention. And the equipment will be locked down and isolated from physical threats.

The proven security models of today's top-tier clouds have led to a growing acceptance of cloud computing business models, and the cloud is now seen by many as a key, trusted component of the IT paradigm. In fact, according to Forrester Research, it appears we've reached a tipping point: 51 percent of small and midsize businesses plan to implement cloud infrastructure services—and 73 percent are looking to significantly upgrade their disaster recovery and business continuity capabilities.<sup>1</sup>

### One Company's Transition to the Cloud-Connected Model

The Situs Companies, headquartered in Houston, Texas, offers commercial real estate consulting and services to both the financial services and real estate communities. According to Bill McCown, Situs Director of Global Information Technology, the company's ongoing success depends on keeping its email and loan servicing applications (respectively, Microsoft Exchange and Cassiopae) up and running.

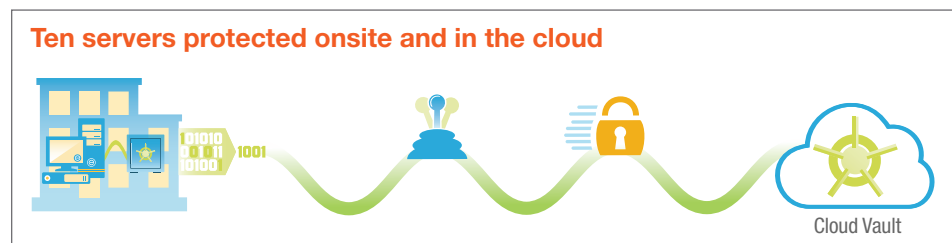
"Our loan servicing group depends on Cassiopae to process loan payments and move cash around," says McCown. "If we miss that system, we have compliance issues in the service-level agreements with our clients. How well the systems are protected, and how well they can be recovered, also impact the ratings Situs receives from agencies such as Standard & Poor's, Moody's, and Fitch Ratings." And that could degrade its global reputation for quick and reliable loan management, earned through due diligence in the primary and special servicing of billions of dollars in commercial mortgage loan assets.

The criticality of its systems became apparent in the wake of Hurricane Ike in 2008. Situs' Houston-based home offices were shut down without electricity for days, and a temporary VPN had to be implemented so workers could remotely access systems. The company's local data center was unaffected but McCown shuddered to think what would have happened if it, too, had been put out of commission.

"If we had had to recover that whole data center based on the backup tapes we had, we couldn't have done it," says McCown. "All of Houston was shut down. No one was getting in or out. There was no communication, no way to recall tapes offsite, no way to provision hardware. We would have been in real bad shape."

In response, Situs implemented a cloud-connected data protection solution for 10 of its critical servers. The company's Cassiopae server, Exchange 2007 email servers, Citrix servers, and Microsoft Windows Domain Controllers are now backed up to a local disk-based vault. This data is then replicated nightly to an offsite vault out of the region.

#### Situs Companies' Cloud-Connected Deployment



<sup>1</sup> "Business Continuity and Disaster Recovery Are Top IT Priorities for 2010 and 2011," Forrester Research, Inc., September 2, 2010.

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The implementation provides Situs with reliable recovery in the case of a disaster as well as faster backups. Instead of almost two-and-a-half days to complete a weekly tape backup, the data protection software completes the job in just six to eight hours. Nightly backups now take minutes instead of hours. Backup management time has also decreased dramatically. “My guy used to spend half his day managing backups,” says McCown. “He now spends 20 minutes.”

### Conclusion

While forecasting technology trends can be tricky, it’s safe to say that the job of managing and safeguarding data in a distributed environment is leading to a cloud-connected future. Stay ahead of the curve. Now is the time to consider the dramatic benefits provided by this new generation of more capable, secure, efficient, and affordable cloud-connected data protection solutions. If you’re already planning an overhaul of key IT responsibilities such as backup and recovery, you should look beyond disk-to-disk offerings to the benefits of cloud connectivity. Get LAN-speed backup and recovery with the security of knowing your business can sustain operations in the wake of any disruption. With distinct yet seamlessly integrated onsite, cloud, and hybrid deployment models, you’re sure to find the right mixture for your enterprise.

### EVault: The Leader in Cloud-Connected Backup and Recovery Services

EVault, founded in 1997 as a cloud backup services provider, is the most experienced player in the market. We built the EVault data protection platform from the ground up to deliver optimal performance in a distributed environment—ensuring efficient bandwidth usage, minimizing storage footprints, and guaranteeing end-to-end security. Our cloud-connected backup and recovery delivers faster protection and more reliable recovery in four easy steps.

1. The EVault cloud-connected technology platform backs up all data to your company’s onsite vault. This vault can contain a full copy of your backup, or simply a cache.
2. The data on the vault is immediately replicated to an alternate vault in your disaster recovery hot site or the EVault Cloud. Delta block-level processing and bandwidth throttling ensure efficient, nondisruptive replications.
3. You quickly recover data from the onsite vault.
4. In the event of a site outage or onsite vault failure, all backups and recoveries are failed over to the cloud vault.

The options offered with your cloud-connected deployment ensure that the solution is shaped to protect your unique IT environment at your headquarters as well as your remote and branch offices.

### Take the Next Step

To learn more about EVault backup and recovery services, contact Disk-O-Tape, Inc. by phone at 800-923-8273 or 216-765-8273, or email at [evault@disk-o-tape.com](mailto:evault@disk-o-tape.com), or visit [www.disk-o-tape.com](http://www.disk-o-tape.com)

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