

## Cloud-Connected Backup and Recovery Delivers a Command Performance



### cloud-connected storage solution (compound noun)

Next-generation data protection deployed in seamless combinations—on-premise and cloud, licensed software and hosted services—to optimize performance, availability, and affordability.

### Harmonize the Best Capabilities of Cloud and On-Premise Solutions

What distinguishes the most innovative, dynamic backup and recovery solutions from the rest of the pack? Is it the benefits that come with transitioning from tape to disk? Is it shorter backup windows and faster recovery times? Is it the confidence that no matter where data is stored, it is totally secure and can be recovered right when you need it? Yes, it's all of these.

But a more elemental, evolutionary leap is underway. It's the cloud, connected to your organization.

While the cloud may not be the ideal foundation for every organization's data protection needs, it undeniably offers virtually every company many clear and compelling data storage advantages. Organizations that fail to put the cloud to use for backup and recovery, in the right way at the right time, are handicapping a vital business process.

Cloud-connected storage solutions use the power of the cloud *selectively*, enabling you to combine cloud-based and on-premise technologies in a seamless hybrid that provides exactly the right mix of security, accessibility, affordability, and performance.

This paper explores how cloud-connected offerings are taking center stage and helping customers thrive in the evolving, exciting data protection environment.

### A New Paradigm for 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—by everything from large-scale applications and heavy volumes of emails to massive files in new media formats. At the same time, user demands and service-level expectations continue to grow. And to intensify matters, IT operating environments are becoming more complex; they commonly comprise multiple sites around the world—each running its own unique blend of hardware, applications, and databases, as well as distinct business processes.

Despite facing these challenges, many management teams are reluctant to invest in the very solutions that could better manage their environments. Alas, government and industry overseers aren't sympathetic to this frugality; they continue to devise and enforce regulations mandating information integrity and access. And of course, data-damaging disasters and outages are an ever-present threat.

For many years, companies have used magnetic tape to harbor their backed up information, but these legacy technologies simply can't keep up. They lack compression and encryption, and they rely on laborious, manually intensive processes, making them slow and vulnerable. Disk-based solutions provide a much faster, more efficient, and more secure foundation for backup and recovery.

Disk-to-disk data protection is state of the art. When you pair on-premise disk-based technology with the powerful scalability and flexibility of the cloud, your organization can do even better.

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

When considering data protection solutions for your multi-platform, multi-site environment, you'll focus on ensuring the efficiency and continuity of business operations. Where and how secondary data is stored and managed is important to you only to the extent it is: reliable and secure; quickly, easily recoverable when and where needed; meeting policy and disaster recovery requirements; and cost effective to maintain. When these conditions are met, a cloud-based data center provides, among many other benefits, the ideal "vault" to achieve secure redundancy of critical systems (disaster recovery best practices demand offsite data replication to safeguard against catastrophe).

Not every vendor's cloud implementation is uniformly terrific. But today's state-of-the-art technology enables the cloud to handily meet the demands of most organizations. The cloud's continually improving bandwidth and proven security protocols—a service provider's data center is likely to be more secure than the typical organization's data center—have resulted in a growing acceptance of cloud computing business models. As a result, the cloud is now seen by many as a key, trusted component of the IT paradigm.

In fact, we've reached a tipping point: according to "Business Continuity and Disaster Recovery are Top IT Priorities for 2010 and 2011," Forrester Research, Inc., September 2, 2010, 51 percent of small and mid-size businesses plan to pursue cloud infrastructure service—and 73 percent are looking to significantly upgrade their disaster recovery and business continuity capabilities within the next 12 months. This mass migration has not escaped the attention of many value-added resellers, who are busily creating unique offerings that combine their services and expertise with existing cloud-based applications.

But not every organization is ready to commit to a fully cloud-based, SaaS solution. Reasons that prohibit companies from maintaining all their backups offsite are as diverse as recovery speed, capital budgeting requirements, and organizational or legal disaster recovery policies.

It's also important to recognize that not all data is created equal: some systems, applications, and data are more critical than others and pose stricter requirements for continuity and availability. Compliance requirements, for example, may dictate that information be managed and stored onsite. So, along with the cloud, on-premise solutions must be considered a vital component of the data protection paradigm.

### **Cloud-Connected Delivers the Best of Both Worlds**

The evolutionary shift to cloud-connected storage solutions is providing companies with a wider range of data-protection options by blurring the boundaries between on-premise, edge, and cloud-based data protection.

A cloud-connected approach to data protection offers the flexibility to tier data recovery as your business requires. For example, onsite appliances that manage rapid, local recoveries can be coupled with the vast storage resources of the cloud to create the perfect balance of speed, accessibility, and cost.

The flexibility of a cloud-connected approach also lets you determine the ideal mixture of capital and operational expenditures. For budgeting purposes, recovery capabilities can be tiered to reflect the unique value and restoration requirements of different types of data, and storage processes can easily be tuned to comply with updated business procedures.

It is the *selective* use of the cloud that anchors this framework, and lets you choose any combination of the following, a mix you can freely adjust as your needs evolve.

- **Cloud or Software as a Service (SaaS)**—Your data is protected in a secure data center and hardware and software is managed for you, including all necessary support and professional services. Protecting your data in the cloud also gives you the inherent benefit of offsite disaster recovery. If your goal is to make life as simple as possible for your IT team but still make sure your data is safe and easily accessible, this approach is ideal.
- **On-Premise**—You manage all the hardware and software you need under your roof. Pre-configured, all-in-one appliances are available to simplify deployment and maintenance and speed backup and recovery cycles. You can choose to maintain your infrastructure with your own team, outsource this responsibility to a certified local provider, or take advantage of both internal and external resources.
- **Hybrid**—With the increasingly popular cloud-connected model, certain categories of information can be stored in the cloud, while those that need to be instantly available can reside onsite—or a primary backup can reside in one (onsite or in the cloud) with replication to the other. This method offers the greatest flexibility to choose the right blend of capital and operational expenditures.

These three diverse approaches give you flexibility and choice. The growing popularity of hybrid deployments reveals a strategy to create an optimal balance of cloud and on-premise benefits that is being embraced by companies of all sizes. This approach is bringing storage solutions into the cloud-connected future.

### Many Scenarios Fit a Cloud-Connected Model. Does Yours?

#### Scenario 1: Small or mid-size services organization moving from tape to disk.

For services organizations such as regional banks, credit unions, and law firms, which may have followed the same data protection path for years, transitioning from a tape-based backup infrastructure can be a real challenge. The effort pays off, however, as you move beyond slow and manual-intensive tape rotation and storage processes; difficult-to-manage and unreliable recoveries; and hard-to-achieve compliance with federal mandates and internal retention requirements.

Building an effective cloud-connected tiered recovery system is the answer.

- **Step 1—Backup:** Replace tape backup with a speedier, more reliable disk-based solution that performs automated backups directly to the cloud. The subscription-based SaaS model is advantageous for companies that prefer an OPEX business model. **EVault® SaaS**
- **Step 2—Replication:** A SaaS solution can automatically replicate your data to the cloud. But you can also add an onsite appliance for mission-critical data that can be backed up and recovered over the LAN in minutes, and is completely managed by the service provider. All local backups are automatically replicated to the cloud. **EVault Express Recovery Appliance**
- **Step 3—Recovery:** Add a warm disaster recovery site delivered by a service provider that can quickly spring into action and create a virtual copy of your entire production environment in the event of a complete site failure or natural

### EVault Optimizes Performance in a Distributed Environment

EVault solutions are WAN-optimized for efficient data transfer, reducing the amount of information that needs to be transmitted and subsequently stored. This speeds the process and, because you pay only for the storage you use, lowers your costs.

- **Block-level, source-side deduplication:** Looks only for data that has been changed, which typically results in a 50:1 size reduction
- **Adaptive compression:** Reduces the resulting set by additional 50 to 90 percent.
- **Back-end deduplication:** Yields an extra 20 percent savings
- **Bandwidth throttling:** Limits the amount of bandwidth used for transmission to minimize disruption during business hours

disaster. Disaster recovery is a vital, though often-overlooked, component of data protection that can ensure business continuity when you need it most. **EVault Remote Disaster Recovery Service**

### Scenario 2: Larger mid-size manufacturing company preparing for all contingencies.

Many manufacturing companies operate in a distributed environment: headquarters, sales offices, and separate manufacturing, R&D, and distribution sites. They are likely to have grown through acquisition, making integration of multiple IT environments an even bigger challenge. For these companies, objectives may include reducing the risk of mission-critical data loss borne of manual processes; realizing a measurable ROI from IT solutions; building a modern infrastructure that leverages the power of the cloud; and ensuring business continuity in the event of a system failure.

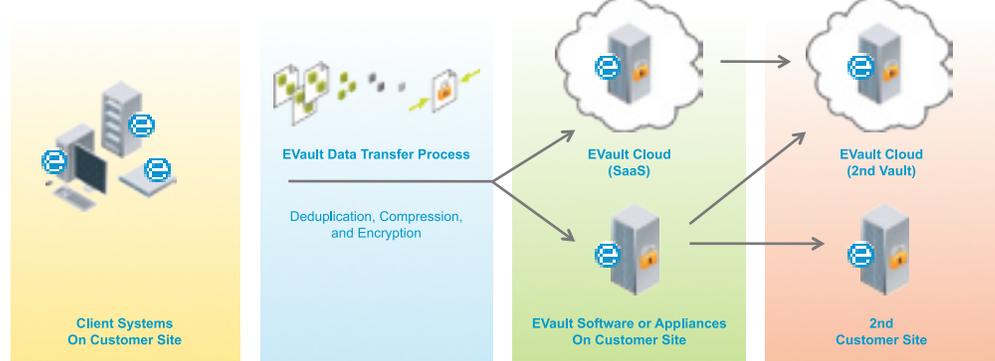
A cloud-connected hybrid storage solution meets these many challenges.

- **Step 1—Backup:** Leveraging the existing IT infrastructure, deploy a software-based disk-to-disk backup and recovery solution, installed on your own servers (or an all-in-one appliance) and managed by your own IT staff. Companies with the right resources often prefer a CAPEX business model. **EVault Software or EVault Plug-n-Protect Appliance**
- **Step 2—Offsite Replication:** Further mitigate the risk of local failure by adding offsite replication of all local vaults to the EVault cloud, leveraging a top-tier ISO- or SAS 70 Type II-certified data center infrastructure. **EVault Offsite Replication Service**
- **Step 3—Recovery:** Incorporate a bare metal recovery capability to ensure that individual servers—including the operating system and applications—can be recovered completely in just minutes in the event of a disaster or server failure. To reduce complexity, ensure that this is a one-step process that is seamlessly integrated with your normal backup procedures. **EVault System Restore**

### EVault: Cloud-Connected the Way It's Meant to Be

The key differentiator for i365's EVault suite of cloud-connected storage solutions is its single technology platform architected expressly for optimal performance in distributed environments. That means EVault can be deployed any way you choose, in any configuration that fits your needs—all components integrate seamlessly—and that it is naturally well suited to providing cloud-connected data protection.

EVault Cloud-Connected Architecture



And a single solution—one technology platform, a single set of source code, a unified architecture, and a consistent user interface—means a simpler, more elegant strategy for managing backup and recovery.

## White Paper

Cloud-Connected  
Backup and Recovery

### EVault Ensures Security End to End

EVault ensures data security through the entire backup and recovery process.

- **Front-end encryption:** Prior to your data leaving the backup server, EVault guards it using 256-bit AES encryption
- **Over-the-wire encryption:** Ensures that backup data sent between the client and the electronic vault is secure, even over the Internet
- **At-rest encryption:** Data remains encrypted while in the vault
- **EVault cloud:** provides Bulletproof security in nine geographically dispersed, top-tier, ISO- or SAS 70 Tier II-certified facilities
- **“Trust no one” approach:** Ensures only you have the encryption keys to your data

### The Cloud Is as Close as Your Neighborhood VAR

If you're looking for a simple way to get cloud-connected, look no further than your local Value Added Reseller (VAR). i365 views the reseller and service provider channel as a vital resource for bringing cloud-connected storage solutions to a broader audience of companies.

i365's unique Cloud-Connected Service Provider (CCSP) program takes collaboration between a cloud technology vendor and the reseller community to a new level. CCSP partners deliver the very best online data protection—powered by EVault technology and designed for the SMB/SME. These VARs deploy a multi-tenant backup and recovery service directly to you. Your data is replicated to the EVault cloud; to ensure reliability, all backups automatically failover to the EVault cloud if the VAR data center fails.

That means you get the best of both worlds: the local, trusted presence and customer intimacy of your neighborhood VAR, and the backing of i365 and the EVault cloud.

### 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. Step one in this shift is to stay ahead of the curve. If you haven't yet upgraded your organization's infrastructure to move beyond legacy technologies, 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. With distinct yet seamlessly integrated on-premise, SaaS, and hybrid deployment models, you're sure to find the right mixture for your enterprise. And if you need assistance, CCSP-certified VARs and resellers are ready to help you get started.

### Take the Next Step

To learn more about EVault cloud-connected storage solutions—or if you're a VAR interested in the EVault Cloud-Connected Service Provider Program—call us at 1.877.901.DATA (3282), email us at [concierge@i365.com](mailto:concierge@i365.com), or visit us at [www.i365.com](http://www.i365.com).



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