

Product Brief

Iron Mountain LiveVault: Cloud Data Protection for Midmarket and Midsize Enterprises

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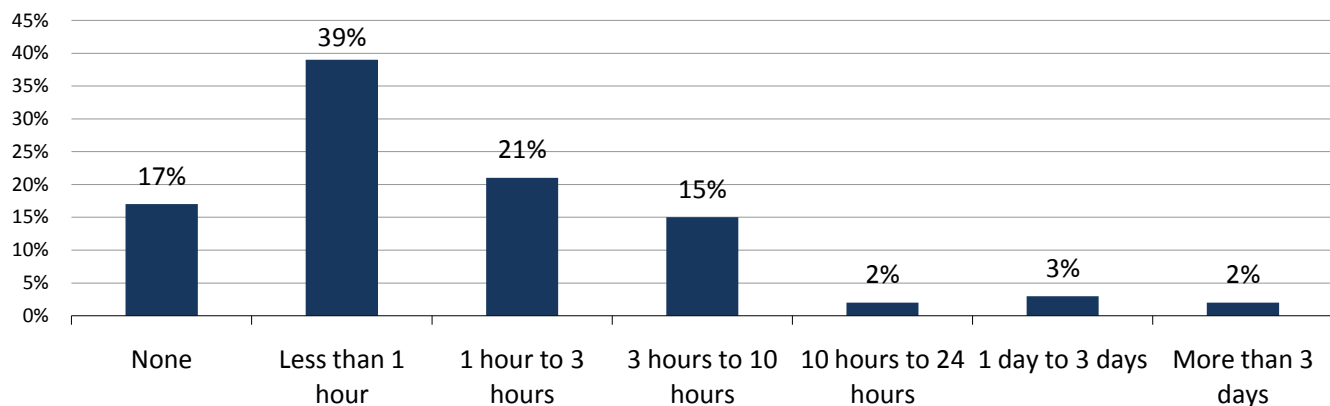
Abstract: Lower disk costs and bandwidth-optimized data transfer are fueling disk-to-cloud (D2C) and disk-to-disk-to-cloud (D2D2C) strategies. [Iron Mountain's LiveVault](#) enables on- and off-premises data protection, providing midmarket and midsize enterprise companies with an alternative to tape-centric backup and recovery.

Overview

Companies of all sizes have come to rely on digital content to conduct business. E-mail, Web sites, databases, financial applications, and collaboration platforms such as SharePoint are standard fare—even at smaller enterprises. With such dependence on electronic communications, commerce, and collaboration, downtime tolerance is low. In fact, ESG research found that over one-half (53%) of companies with less than 25 servers could tolerate one hour or less of downtime before experiencing significant revenue loss or other adverse business impact and another one-fifth (19%) could withstand one to three hours of downtime (see Figure 1).¹

Figure 1. Downtime Tolerance for Tier-1 Data

For tier-1 data, please indicate the amount of downtime your organization can tolerate before you experience significant revenue loss or other adverse business impact.
(Percent of respondents, sites with less than 25 servers, N=87)



Source: Enterprise Strategy Group, 2010

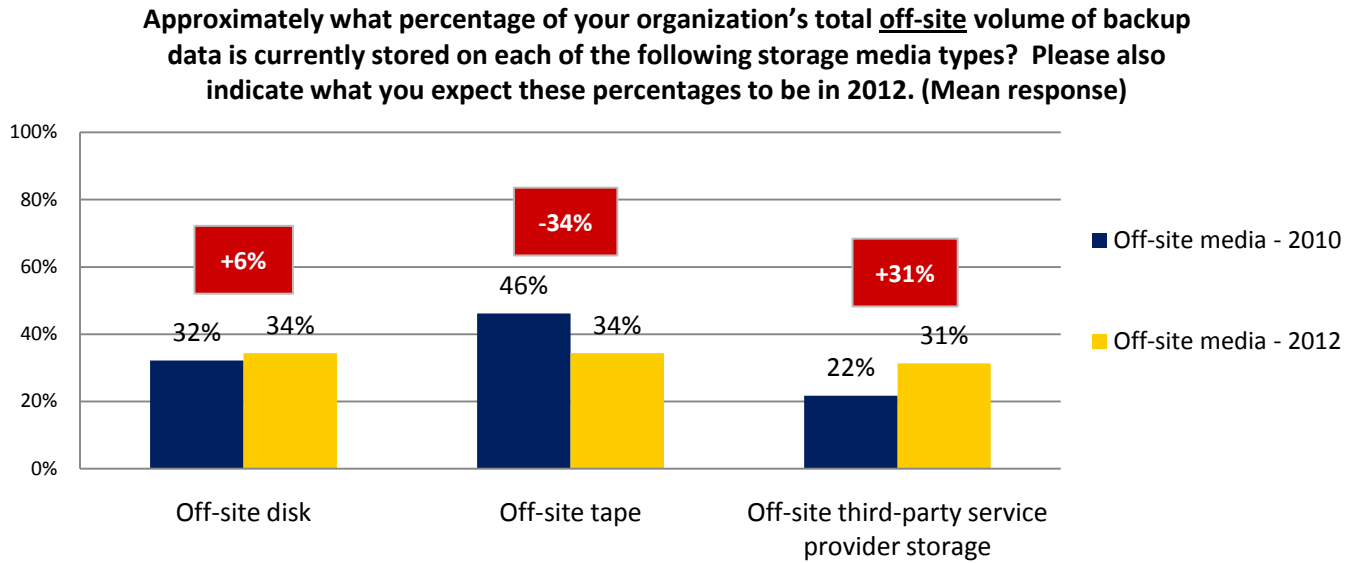
To minimize risk of downtime, best practices suggest making copies of data—including an off-site copy—to facilitate recovery in the event of an interruption. ESG research found that even though backup is performed, only 63% of respondents with 25 servers or less are confident that tier-1 data is protected.

Organizations that rely on once-per-day, tape-centric backup strategies may be least confident. Tape-based approaches may also introduce new issues including less-efficient, more operator-intensive processes (more time to complete backup or recovery, more cost, and introduction of human error).

Online backup services are gaining in adoption and interest. As shown in Figure 2, ESG research respondents cited that 22% of their backup data capacity is currently stored at an off-site third-party service provider with a 31% increase in a “cloud” storage tier expected in the next 24 months while off-site disk capacity expected to increase by 6% and off-site tape capacity expected to decrease 34%.

¹ Source: ESG Research Report, [Data Protection Market Trends](#), April 2010. All statistics are from this publication unless otherwise cited.

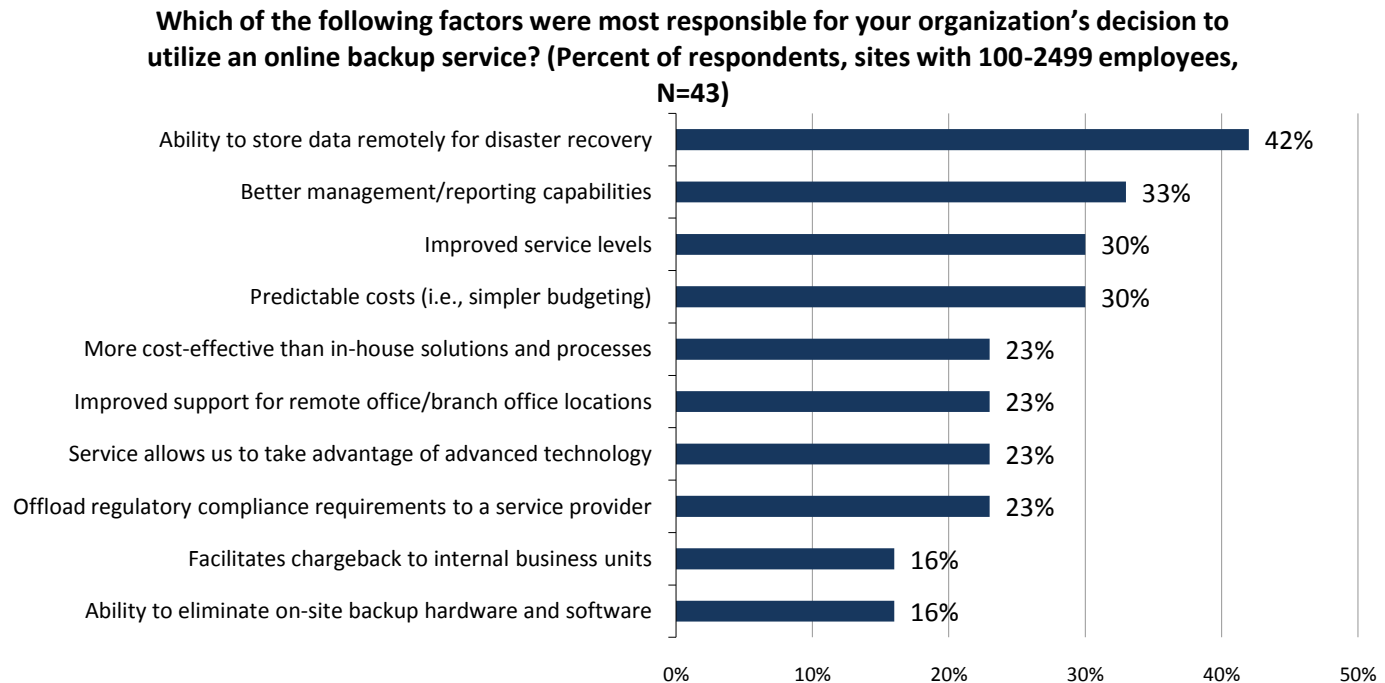
Figure 2. Off-site Storage Media Types – Currently and 24 Months From Now



Source: Enterprise Strategy Group, 2010

The decision to utilize third-party backup services is often driven by an IT organization’s desire to provide a higher level of service, reduce costs, or take advantage of more advanced technology. As shown in Figure 3, midmarket and small enterprise organizations cited the ability to store data remotely for disaster recovery (42%), better management and reporting (33%), and improved service levels (30%) as the top three considerations for using an online backup service.

Figure 3. Justification for Adoption of Online Backup Service



Source: Enterprise Strategy Group, 2010

Iron Mountain’s LiveVault can address many of the improvements that midmarket and midsize enterprises are seeking. LiveVault is an online backup service that enables D2C or D2D2C backup and recovery strategies. It automatically and continuously backs up data over the Internet or a private network connection to a remote and secure mirrored Iron Mountain facility.

Analysis

Cloud-based backup and recovery can be designed in a few ways:

- **Backup SaaS.** IT accesses an application hosted and operated at a central location via a Web interface and takes advantage of a shared, scalable infrastructure. D2C transfer of data occurs at user-defined intervals.
- **Hybrid SaaS.** Another approach is to use a backup service while also maintaining a duplicate on-premises copy on disk. A D2D2C transfer of data is performed, offering a local copy for operational recovery and a cloud copy for disaster recovery (DR) purposes.
- **Electronic Vaulting.** This approach involves on-premises backup infrastructure (software and hardware) and an on-premises copy on disk. An off-premises copy is electronically vaulted to third-party service provider storage for a DR copy.

Iron Mountain offers solutions that fit all models. For electronic vaulting, Iron Mountain offers CloudRecovery for [Microsoft](#) DPM 2007 and DPM 2010, allowing DPM users to maintain a cloud-based copy in addition to local disk and tape.

Iron Mountain's LiveVault fits backup SaaS and hybrid SaaS models. It protects Microsoft Exchange, SQL applications and Windows, Linux, and Solaris servers. A lightweight agent installed on protected servers compresses and encrypts data and facilitates continuous backup over a secure communication link to the cloud—in this case, an Iron Mountain data center. Data can be transferred directly to the cloud (D2C) or through a LiveVault TurboRestore Appliance (D2D2C) to a remote Iron Mountain facility. Data is also sent to a duplicate LiveVault Data Center as a failsafe.

The initial backup can be accelerated via a Backup Data Shuttle, which “seeds” bulk data in the Iron Mountain cloud. LiveVault deduplicates data at the source (only changed blocks are transmitted after the initial backup, minimizing bandwidth consumption). Policies and schedules are managed via the LiveVault Web interface. Recovery is accomplished in a few ways:

- Directly from the cloud, which may be most suitable for small file sets.
- From a local TurboRestore Appliance (TRA), typically for larger file sets such as a whole server or site from the local copy. A single appliance (Iron Mountain- or user-supplied) protects multiple servers up to 24 TB.
- Using a Restore Data Shuttle service that transfers bulk data (whole server or site) from the off-site copy via a portable storage device shipped to the recovery site by Iron Mountain.

LiveVault's features address data protection challenges, including:

- **Flexible implementation.** LiveVault can be configured in D2C or D2D2C scenarios to meet cost and performance needs. Off-site, cloud-based storage provides inherent DR and may improve response times for recovery of single or small sets of files over tape-based approaches. Local disk accelerates backup performance and improves recovery time, especially for larger recoveries.
- **Continuous data capture.** LiveVault operates in an automated fashion, “collecting” and transferring data continuously. Unlike once-per-day, scheduled backups, a continuous approach ensures that the most up-to-date versions of files are backed up, improving recovery point objectives (RPOs) and minimizing data loss in the event of an interruption. It also eliminates the need for a backup window since ongoing backup occurs unobtrusively in the background.
- **Centralized management.** Management through a single Web interface allows for local or remote and central management of distributed sites such as remote and branch offices. This capability can facilitate backup consolidation and introduce operational efficiency.
- **Compliance and litigation support.** In addition to physical security at Iron Mountain's facilities, LiveVault employs powerful 256-bit AES encryption and user access controls to prevent unauthorized access to data as well as retention settings to aid in meeting regulatory or corporate mandates. Iron Mountain also offers LiveVault DiscoveryAssist—a method of indexing and searching of backup data—to rapidly gain access to

and retrieve data stored in LiveVault repositories to support Iron Mountain's Stratify eDiscovery search/review applications.

- **Capacity and bandwidth optimization.** LiveVault introduces network efficiency in a few ways. First, LiveVault applies deduplication, only capturing and transferring changed blocks during backup. Also, data is compressed at the source system before it is transmitted over the LAN or WAN. Finally, user-specified settings control bandwidth usage during specific windows of time.
- **Scalability.** In addition to capacity optimization, LiveVault online backup offers elasticity in storage capacity, allowing organizations to scale the amount of required capacity up or down—delivering multi-terabyte protection. Features such as retention settings and lifecycle management of data deliver additional flexibility in managing online backup capacity—and costs.
- **Fully managed service with remote administration and management.** LiveVault is a fully-managed cloud data protection service with proactive administration and monitoring. Iron Mountain removes the burden of managing the backup infrastructure and the data protection processes, including administration and management. By eliminating media management, exception handling, and operational headaches, IT managers can focus on core projects instead of backup chores.

LiveVault is a solid solution for midmarket and midsize enterprise organizations. Areas the company should consider addressing include server virtualization and additional application support. Companies of all sizes are realizing the benefits of server consolidation via virtual server technology; LiveVault can back up a virtual machine today, but not the virtual environment. Solutions that efficiently back up and recover data for both physical and virtual machines would be preferred over multiple management approaches. While LiveVault covers the most popular Microsoft applications, Iron Mountain might consider extending application-aware support for SharePoint and Oracle databases.

Iron Mountain's mission is to help customers reduce risk and cost, and optimize business value from their information. To that end, organizations adopting LiveVault will be able to leverage Iron Mountain Connected for desktops and laptops for comprehensive enterprise data protection in addition to taking advantage of value-added Iron Mountain solutions for archiving and eDiscovery, extending information management from information creation to destruction.

The Bottom Line

Iron Mountain's online backup solution is not unique; however, the company's tenure in the online backup segment, as well as its long-term reputation as a trusted partner for retention services around the world, make it stand out. Iron Mountain's scale (1,000 information centers in 40 countries), 60 years of experience, financial stability, and industrial-strength technology separate it from newly-minted consumer- and commercial-grade solutions with respect to reliability and security of information. For example, Iron Mountain is one of the few commercial- or consumer-grade online backup solutions to offer service level agreements (SLAs).

LiveVault's new pricing structure is simpler, provides more flexibility, and makes costs more predictable. Instead of a flat per-gigabyte fee structure, Iron Mountain offers bands of capacity with volume discounts as capacity scales. The pricing model is also affected by retention settings (from 90-day retention to up to 7 years).

While the transition from tape- to disk-based backup is part of many IT organizations' backup modernization strategies, leveraging a cloud-based service such as Iron Mountain's can provide savings in administrative time and capital budgets. Capital investments in and management of data protection infrastructure are removed, often making a service approach more palatable for budget-constrained organizations. Even if organizations are skeptical about an all off-premises strategy, LiveVault's D2D2C offering can help ease midmarket and small enterprise organizations into the cloud.