REDEFINING BACKUP & RECOVERY: A Call to CIOs

CIO Custom Solutions Group

WHITE PAPER

BACKUP AND RECOVERY AS WE KNOW IT IS CHANGING.

Increasing complexity in the data center, including the rapid deployment of virtual servers, ever-expanding compliance requirements, and increasing amounts of sensitive data on mobile devices has put more strain on backup and recovery.

"There are cost savings of virtualizing the environment, but it breaks traditional-style backup that they've been doing in their physical environment."

— LAUREN WHITEHOUSE,
SENIOR ANALYST
ENTERPRISE STRATEGY GROUP

As such, managing data is a subject that needs to be re-evaluated and brought out of the back office to the desks of IT VPs and CIOs. A new approach to managing data, referred to as "modern data and information management," supports further growth of strategic IT projects (such as virtualization and mobility), and can also significantly lower operating costs and improve operational efficiencies.

According to a recent CIO Market Pulse survey[1] on data protection and management, conducted on behalf of and sponsored by CommVault, 42 percent of CIOs describe their organization's data management practices as "outdated," and 31 percent describe them as "chaotic." This comes as no surprise considering the rapid growth of data and the evolution of new technologies. Unfortunately, these outdated and chaotic data-management practices can halt strategic initiatives, as they leave critical data unprotected and inaccessible, and exacerbate the data growth problem.

"The status quo just doesn't apply anymore," says Lauren Whitehouse, senior analyst at Enterprise Strategy Group. "You can't do [backup and recovery] the way you used to. It's causing organizations to rethink their strategy."

This sentiment is evidenced by Gartner's 2011 Magic Quadrant for Enterprise Disk-Based Backup/Recovery. According to the report, "While backup is among the oldest,

[1] The CIO LinkedIn Market Pulse Survey was conducted among the members of the CIO LinkedIn Forum from February 23, 2011 to March 4, 2011, there were 111 respondents. This survey and all related materials were sponsored by CommVault.

[2] Gartner, Inc., Magic Quadrant for Enterprise Disk-Based Backup/Recovery, Dave Russell et al, January 28, 2011. The Magic Quadrant is copyrighted 2011 by Gartner, Inc. and is reused with permission. The Magic Quadrant is a graphical representation of a marketplace at and for a specific time period. It depicts Gartner's analysis of how certain vendors measure against criteria for that marketplace, as defined by Gartner. Gartner does not endorse any vendor, product or service depicted in the Magic Quadrant, and does not advise technology users to select only those vendors placed in the "Leaders" quadrant. The Magic Quadrant is intended solely as a research tool, and is not meant to be a specific guide to action. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

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most performed tasks in the data center, the industry is undergoing significant change as organizations accelerate new technology adoption and show a propensity to implement new solutions."[2]

The January 2011 Magic Quadrant is the inaugural version of a new Magic Quadrant that according to authors of the report, "looks beyond enterprise software-only backup vendors and their solutions, and places a new emphasis on evaluating a broader set of vendors that offer disk-based data capture and data recovery capabilities."[3]

A modern data-management strategy goes far beyond traditional backup and recovery. It consists of a tightly integrated blend of snapshot, replication and persistent copies—from physical or virtual servers—that are secure, deduplicated and accessible through a single point of entry.

Drivers for Modern Data Management

Virtualization is one area where IT organizations are feeling the constraints of traditional data management. As they reap the benefits of server consolidation—including reduced operational costs and increased efficiency—and begin expanding virtualization efforts to include more business-critical applications, IT organizations find it necessary to rethink their data-management practices. Storage capacity and performance management, backup and recovery, and storage provisioning are all made more challenging by an increase in data resulting from virtualization.

"There are cost savings of virtualizing the environment, but it breaks traditional-style backup that they've been doing in their physical environment," Whitehouse says. "As soon as they hit any point of scale beyond 20 percent of servers being virtualized, they start to see how inefficient the old way is, and they have to rethink it."

The Need for New Data Protection Strategies

With high server consolidation and the resulting increased data density per physical host, the old protection strategy of moving data from one place to another simply does not work. No matter how efficiently done, there is not enough time to copy all the data and allow the short recovery-point and recovery-time objectives that businesses increasingly demand. A data center redesign prompted by virtualization requires a fundamental rethink and assessment of traditional data protection strategies.

Cloud-based storage also strains backup and recovery procedures, as IT organizations and business units have an inexpensive means to store large amounts of data—data that must also be backed up and recovered. As these data sets grow exponentially, IT organizations have only a fixed amount of time in which to carry out backup and recovery processes. And they must do so without affecting performance and availability. This is becoming increasingly difficult as business operations extend beyond the traditional eight- to 10-hour workday.

Data is being accessed around the clock, and stored on a myriad of mobile devices as users take work home on laptops or remotely access the network from laptops, smartphones and tablets. Recent research from Enterprise Strategy Group reveals that endpoint devices, including laptops, are often under-protected.

According to the research report *Endpoint Device Backup Trends,*[4] "less than half (49 percent) of organizations back up all of their desktop PCs and only 38 percent do so for laptops." Data on these devices is often subject to stringent security and compliance requirements, but managing its protection cost-effectively can be difficult given the rapid growth in mobility and data. Legacy approaches to backup and recovery fall short due to network, security and usability constraints, and slow, resource-intensive end-user data restoration.

Meanwhile, the increasing value of the data as a business differentiator makes its protection increasingly important, regardless of where it resides. Both the IT and business drivers for investments in modern data management focus on extracting the business value of data. Top business drivers identified by the Market Pulse survey respondents include improving operational efficiency and productivity, improving the ability to access and analyze business results and information, and improving business flexibility.

Top IT drivers identified by survey respondents include improving the IT organization's ability to become a more proactive and strategic partner to the business, reducing IT complexity through standards-based technology, and empowering the business with tools to perform data management functions with less IT involvement.

One Market Pulse survey respondent summed it up well: "Everything is data,

CommVault® Simpana® software is a complete solution for modern data management and information governance that includes the following capabilities:

- ✔ Backup and recovery
- ✔ Snapshots
- ✔ Deduplication
- ✔ Replication
- ✔ Disaster recovery
- ✔ SRM
- ✔ Cloud storage integration
- ✔ Desktop and laptop protection
- ✔ Archiving
- ✔ Storage optimization
- ✔ Virtual server protection
- ✔ Cloud storage integration
- ✔ Retention lifecycle management
- ✔ Enterprise search
- ✔ Privacy violation management
- ✔ Records declaration
- ✔ Content organization
- ✔ Compliance
- ✔ eDiscovery

and data is everything." This is true in judicial hearings as well as business. In today's world, litigation is part of doing business. The exponential growth of data, coupled with evolving case law, amendments to the U.S. Federal Rules of Civil Procedure and the growing European focus on electronic disclosure, make responding to litigation difficult and expensive. The challenge can be made even more daunting if information resides in silos across an enterprise, as is likely to be the case.

The Benefits of Modern Data and Information Management

Modern data and information management software offers a solution to today's data management challenges: "By being able to store, relate, classify and search for all related data, the organization can become more efficient in its day-to-day business processing, compliance initiatives, disaster recovery and litigation," said one respondent to the Market Pulse survey.

"All IT investments at the end of the day should be about business value; for IT to have true credibility it needs to be seen as supporting the business initiatives," says Tom Honan, senior vice president and CIO at CapitalSource Bank. "Do I want synchronization and deduplication because they're buzzwords, or are they really adding business value? It's worth doing because the business sees results," he said.

Modern Data and Information Management to the Rescue

Modern data and information management is a tightly integrated blend of snapshot, replication and persistent copies that are secure, deduplicated, managed and accessible through a single, unified platform. CommVault® Simpana® software is one such unique solution and is identified as a "Leader" in Gartner's Magic Quadrant for Enterprise Disk-Based Backup/Recovery.

"CommVault Simpana software is inherently different from other data protection offerings in that it's built from the ground up with a single-platform approach, which allows for unprecedented improvements in IT operations, cost savings and risk reduction," says David West, senior vice president of marketing and business development at CommVault. "We can truly help enterprises overcome broken backup processes as they look for new ways to store, access and protect their data through virtualization and cloud computing."

Simpana software is application, operating system, and disk-aware. It quickly creates copies that are highly available, by integrating and leveraging hardware array-based snapshot technologies. Copies of data are deduplicated and efficiently moved to appropriate tiers of storage, whether it is disk, tape or cloud. This data can be seamlessly retrieved for multiple possible uses, including disaster recovery, data mining, eDiscovery, compliance, or regulatory requirements. This end-to-end activity is what truly modern data and information management is all about.

CommVault Simpana software includes the following functionality:

Backup and recovery: Simpana software is optimized to protect data and information assets whether they are physical, virtual or in the cloud. This unified approach to backup and recovery replaces outdated legacy backup solutions that impact operational efficiency and leave businesses at risk. Automated, policy-driven snapshot-management technology for both physical and virtual environments allows companies to produce backups up to 50 percent faster.

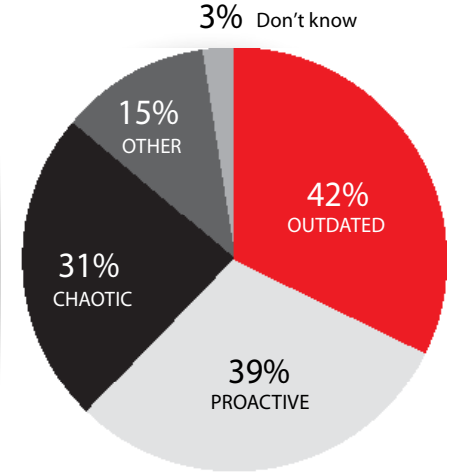
Deduplication: Simpana software fully integrates data deduplication to eliminate redundant data where bottlenecks actually occur—at the source. Source-side deduplication is not limited to small data sets or remote sites, but can be applied against even the largest data sets. If target-side deduplication is required to meet business needs, administrators have the flexibility to select this approach with a simple check box. Furthermore, Simpana software is the only solution that provides integrated deduplication to tape, allowing businesses to take advantage of tape media for long-term retention.

CURRENT DATA AND INFORMATION MANAGEMENT PRACTICES

42%
of CIOs describe their organization's current data management practices as outdated.

31%
describe their data management practices as chaotic.

SOURCE: CIO Market Pulse Survey, 2011



Cloud storage integration: Simpana software integrates with cloud storage providers using a native REST/HTTP interface to deliver seamless data and information management across on-site and cloud-based storage architectures. With its single platform, modular approach to data management, Simpana software offers unique value with cloud storage. Integrated features like deduplication and encryption make Simpana software efficient for moving backup and archive data across a network for long-term cloud storage solutions. Plus, integrated alerting, reporting, and data verification functionality help ensure that data has safely reached the cloud.

Virtual server protection: Simpana software is the only data management and data protection solution that delivers end-to-end protection for both physical and virtual server environments. Auto-discovery and auto-protection capabilities ensure all virtual servers are protected. Plus, hardware snapshot-based recovery copies are created in minutes with minimal impact on production systems, allowing protection for even the largest virtual environments. Real tests have demonstrated that 500 virtual machines can be protected in 17 minutes.

Snapshot management: Simpana snapshot-management technology dramatically drives down operational and investment costs associated with management and protection of critical application data. By creating hardware snapshot copies internal to the storage array, high-speed recovery copies can be created with minimal impact on production servers. In just a few minutes, hundreds of systems and associated business applications can be protected.

Enterprise search: Simpana software allows business users to search and access data across the enterprise. An intuitive Web interface can be used to search millions of items based on meaning and the characteristics of the information itself, including frequently used keywords and phrases, date ranges, and the use of files and attachments. Speed and scalability capabilities help reduce risk, optimize efficiency and improve the value of data by putting it at users' fingertips.

eDiscovery: Simpana eDiscovery software provides an effective framework for managing a range of information management activities, including retaining and accessing archived e-mail messages, files, and documents, along with backup data.

All this is achieved from a single console and a single infrastructure, providing a comprehensive, risk-averse and cost-effective eDiscovery solution.

By deploying CommVault Simpana software, Honan says he's avoided approximately $300,000 to $400,000 in capital expenditures from a hardware data deduplication approach. He has also seen a workforce productivity gain because his team doesn't have to work weekends or late at night to conduct disaster-recovery testing. Honan's line-of-business customers see better recovery and availability for their critical business systems as well.

"As a manager, you look backwards and say, 'how often do I talk about certain topics?' You're focused on the areas where you need to improve things," Honan adds. "I spend very little time with the business people or tech staff talking about fixing problems related to backup, deduplication, replication, things of that nature."

To learn more about modern data and information management with CommVault Simpana software, visit www.commvault.com

3 Gartner, Inc., Magic Quadrant for Enterprise Disk-Based Backup/Recovery, Dave Russell et al, January 28, 2011, page 2.

4 Endpoint Device Backup Trends, Enterprise Strategy Group, December 2010.