Beyond Storage and Backup: Transforming Data Management to Support the "New Style of IT"

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Lynda Stadtmueller
Vice President, Cloud Services

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INTRODUCTION

As a way to bring greater value to the business, IT departments are embracing the "new style of IT." Encompassing more than just infrastructure, or management platforms, or processes, the new style of IT is a service-based approach to creating and delivering technology resources to constituents (employees, partners, and customers). To get there, businesses are re-engineering infrastructure environments to be more flexible and scalable, shifting the IT budget from capital to operating expenses, and reorganizing roles and responsibilities to accommodate collaboration across business units.

But too often, storage—that unsung workhorse of the data center—is still ignored during these transformation efforts, as budget, energy, and resources are directed toward the computing environment. The unfortunate truth is that most businesses are still treating storage the same way they did a decade ago, by throwing capital at it.

But the "old style of IT"—capital-intense, inflexible, and slow—will not work for today's storage challenges. In the current environment, "storage" is no longer just about storage; that is, the placement of and access to data. Instead, what we call "storage" is really data management: collecting, protecting, insuring, and manipulating valuable corporate data assets securely, cost-effectively, and efficiently.

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> "Growth of data storage requirements" is now the top data center concern of IT decision-makers, according to a 2014 Frost & Sullivan survey.
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As they journey toward the "new style of IT," businesses must transform their approach to data management. This requires reassessing current infrastructure, processes and solutions covering storage, backup and recovery, risk assessment, compliance assurance, and other areas of responsibility. Through a strong data management strategy, IT can ensure that the business has continual, fast, cost-effective, and secure access to its precious data resources; thus extending the value of the data to support business goals.

In this paper, we will discuss how to transform your old storage and backup environment into a "new style of IT"-worthy data management environment. We will also examine the growing adoption of storage professional services to develop and implement data management strategies.

## WHY NOW IS THE TIME TO REASSESS YOUR STORAGE AND BACKUP ENVIRONMENT

If you shoulder any responsibility for the corporate storage and backup environment (a broad range of roles that includes database administrators, storage directors, infrastructure managers, CIOs, and others), you undoubtedly have already been feeling the strain of data growth. Your department may be struggling to:

- Find a place to store the ever-growing volumes of data, without incurring excessive capital costs.

- Ensure sufficient network bandwidth to access the data cost-effectively.

- Assure consistent performance of increasingly critical analytics workloads, by monitoring and adjusting input/output traffic.

- Satisfy user demands for always-available data—no downtime, no excuses.

- Comply with an array of changing regulations for handling personally identifiable information and retaining financial information.

- Manage a backup solution that serves as insurance for your proprietary and precious data assets, and stretches across multiple environments.

The challenge is formidable, and the pressure is increasing. In Frost & Sullivan's annual survey of IT decision-makers, respondents are asked to rank their top-three data center challenges.[1] In 2014, for the first time, "data storage requirements" was ranked as the top concern, cited by 32 percent of respondents. Budget and cost issues take the next two slots, with "high maintenance costs" cited by 27 percent, followed by capital budget constraints (26 percent).

Figure 1: Top data center challenges reported by IT decision-makers

N=401
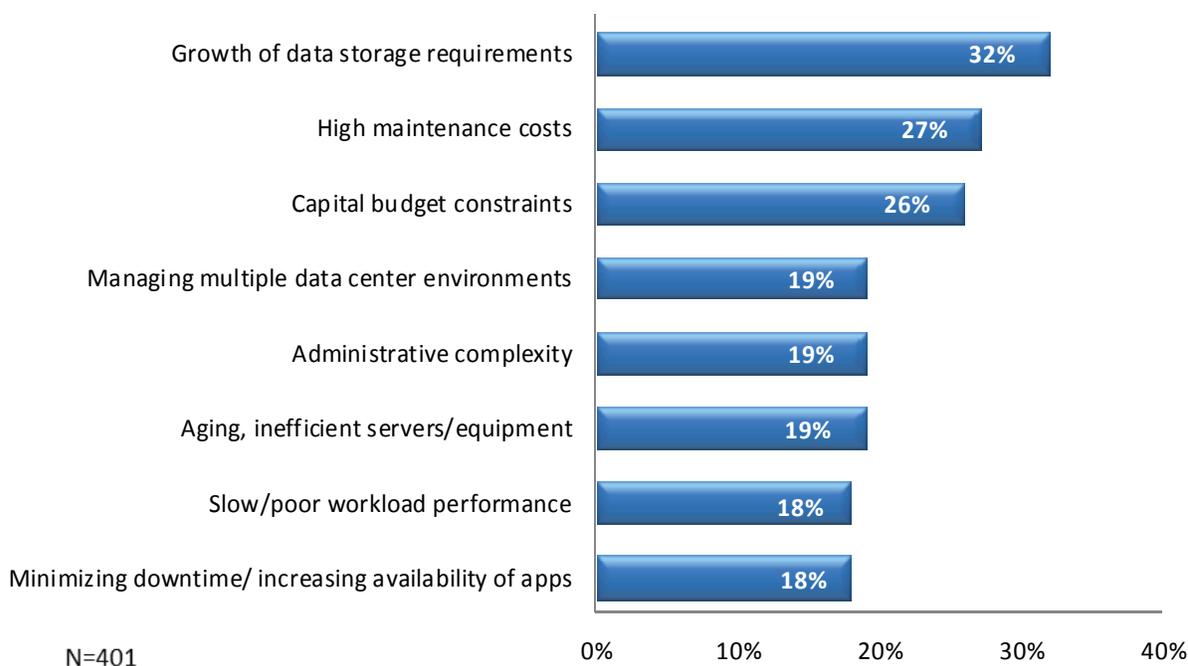
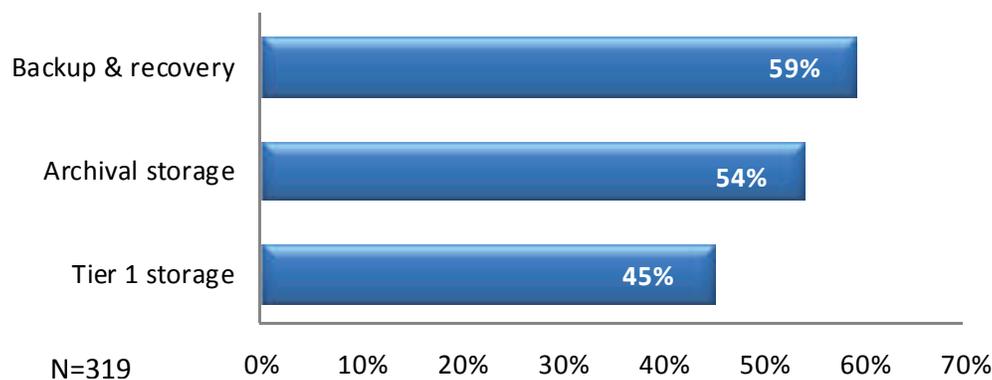*Source: Frost & Sullivan 2014 Cloud User Survey*

Concerns about operational efficiencies and labor costs factor into issues such as "managing multiple environments" and "administrative complexity" (19% each). Workload performance and availability (each cited by 18 percent) also weigh heavily on decision-makers' minds. Each of these concerns is exacerbated by storage growth.

[1] In April 2014, the fifth annual Frost & Sullivan Cloud User Survey was launched via Web to U.S.-based IT decision-makers across a range of industries and company sizes. A total of 401 valid responses were returned, providing a +/–5 percent margin of error at a 95 percent confidence level.

To solve storage and backup challenges, many businesses have embraced newer technologies, such as virtualization and cloud, which promise cost and operational efficiencies. According to the Frost & Sullivan survey:

- Fifty-eight percent of businesses have virtualized at least some of the storage in their data center.

- Of businesses that utilize public cloud services, 54 percent have entrusted archival storage to their cloud provider. A surprisingly high 45 percent say they have placed at least some Tier 1 storage in the public cloud.

- In their backup and recovery plans, 59 percent of businesses use public cloud. Fifty-seven percent subscribe to backup and recovery Software as a Service.

Figure 2: Percent of IaaS users reporting they place storage and backup workloads in the public cloud

N=319

Source: *Frost & Sullivan 2014 Cloud User Survey*

But the adoption numbers reveal yet another challenge: complexity. Each time IT "tries out" a new environment or technology or platform, it effectively adds to the administrative burden. Each storage environment must be managed separately, making it difficult to achieve efficiencies in processes or capacity allocation.

Unfortunately, as many businesses are discovering, relying on ad hoc storage and backup solutions for each workload quickly leads to data chaos, a maze of disparate configurations, media, vendors, management platforms, and service partners.

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Of even greater concern is that an ad hoc approach makes it difficult or impossible to scale your storage and provide the resiliency you need to support business growth. Protecting your data and providing the always-available access your colleagues, partners, and customers expect requires more than a single-point-of-failure

backup solution. True resiliency in a growing and dynamic data environment requires a solution that is intelligent, secure, and scalable in the way data is stored, protected, and allocated across multiple resources.

In contrast, when your data management strategy is in chaos, you have no consistent way to know what is still working and what isn't, where the vulnerabilities and strengths are, where your investments are sound and where you are letting precious budget dollars seep out the door—at least not until something goes terribly wrong.

REDEFINING STORAGE: THE BENEFITS OF A DATA MANAGEMENT STRATEGY

To ensure that your storage and backup environments are able to support your business's IT needs today and into the future, you must rethink your approach. Rather than considering "storage" and "backup" as discrete, workload-specific functions, you should instead think of them in the context of a data management strategy, designed to protect and provide access to your company's precious data assets.

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> A holistic data management strategy can provide an efficient, flexible, and cost-effective way to support data storage and backup needs in the new IT environment.
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A holistic data management strategy ensures that technology is aligned with business requirements for data protection in the new IT environment. Such an approach can provide an efficient, flexible, and cost-effective way to support data storage needs, even as your data assets increase in volume, importance, and demand. A holistic strategy will address backup and recovery, ensuring that data is replicated at appropriate intervals and restored in appropriate timeframes so as to minimize or eliminate disruption to the critical applications and workloads that rely on it. Data management encompasses not only storage and backup infrastructure (and its integration with computing infrastructure) but also processes, operations, and tools to support ongoing assessments, testing, and management.

A holistic data management approach allows you to assess storage needs and solutions to:

- **Maximize workload performance** – by ensuring that the storage solution can support the input/output required by the workload, and the backup solution is configured with appropriate recovery points and times.
- **Support scalable capacity** – to support data growths, spikes, and decreases, as dictated by each workload.
- **Ensure data protection** – by appropriately securing data assets, in transit and at rest, in primary and backup databases.
- **Support high availability** – by aligning your backup and recovery solutions to your storage, thus ensuring that the right data is available to the right applications in the right priority order.
- **Optimize costs** – both capital and operating costs for infrastructure and maintenance**.**
- **Simplify data management** across multiple storage solutions – providing staffing flexibility and decreasing time to perform tasks.

GETTING STARTED WITH DATA MANAGEMENT TRANSFORMATION: PROFESSIONAL SERVICES

For most IT leaders, this vision of a holistic storage and backup environment is attractive—and necessary. The challenge is overcoming the huge gap between today's chaotic environment and the end state. Who has time to reassess every workload? Who can afford to rip-and-replace inefficient systems? Who has the knowledge to reassess skillsets and operational processes? When storage managers and database administrators are running at full speed, the idea of transformation may seem like a luxury.

But it is not a luxury. It is a necessity. Your business will not survive if you keep doing things the old way. If your organization is already on a path toward transforming the computing environment, any inadequacies in your storage processes will quickly and glaringly become apparent.

So, you have to transform. But without time, budget, and expertise, where do you even start? For many businesses, the answer lies in engaging expert professional services. IT professional services are consistent with one of the tenants of "the new style of IT"; that is, the enterprise IT department is not a cottage industry that must perform every role with its own technicians. Instead, IT leaders are charged with delivering services to constituents—and they have the freedom to choose the best, most cost-effective source for each service (whether in-house or through an expert partner). In fact, Frost & Sullivan research shows that fully 90 percent of businesses plan to engage with third-party expert services to help them develop and implement their IT transformation strategies. The logical next step is to utilize professional services also for transforming storage and backup.

Professional services consultants guide you through data management transformation by performing or leading a number of initiatives, including:

- **Develop a business plan** to identify the business value associated with a data management transformation initiative. This step ensures that all stakeholders share a vision of why the effort should be undertaken and what it will yield—an important foundation for securing funding and support from business leaders.

- **Assess your workloads**, based on performance and risk requirements. Consider how storage and backup solutions affect both the computing workloads and the databases.

- **Evaluate your existing storage solutions.** Transformation should not be a "rip and replace" effort; instead, you should be able to preserve the infrastructure and solutions that are currently working.

- **Build a strategic roadmap.** A roadmap will ensure that future investments support the business vision. As hardware ages or new workloads are introduced, decisions can be made in context of the overall data management strategy.

- **Redefine operational processes** to ensure alignment with business priorities. Data management transformation is not just about technology; it also impacts operations, governance, financial, compliance, procurement, and other business processes.

- **Develop and track** performance and cost metrics for measuring success. Today's businesses are assigning profit and loss accountability to business units on a granular level. That means line-of-business colleagues need to have visibility into the operational costs and performance of their applications.

- **Execute the transformation.** This includes implementing new storage and data protection architectures, and managing migration of information on the new infrastructure, while minimizing the impact on business processes and users.

HOW TO CHOOSE A PROFESSIONAL SERVICES PARTNER

In recent years, many technology companies have started offering professional services. In addition to traditional business consultancies, these include IT vendors and value-added resellers who are looking to add a recurring revenue stream; network service providers that are jumping onto the "cloud" bandwagon; traditional hosting service providers who are suddenly showing interest in the enterprise data center; and software companies looking to expand their share of wallet. But hanging out a shingle does not confer expertise. In the storage professional services business, it is up to the buyer to thoroughly vet and research the options before selecting a partner. If you don't ask the right questions, you can end up with headaches instead of the data management transformation you were expecting.

As you research partners, consider these criteria:

- **Expertise in relevant technologies and workloads.** Data management transformation covers a lot of IT disciplines, including storage, backup and recovery, archiving and "big data" analytics. While many firms offer expert consulting services in one or more of these areas, the success of your initiative depends on finding a partner with expertise in *all* these areas. Your partner should understand that the data is the most critical element, and help establish solutions that allow you to manage and protect the data effectively.

- **Expertise in business process transformation.** As noted, envisioning a utopian state of transformation is very different from making it happen—especially when it impacts many areas of the business beyond IT. Your partner should have experience in organizational change management processes, which includes helping your organization to communicate with business leaders effectively, obtain input, establish shared metrics, and assess success.

- **Powerful management technology.** A flexible and feature-rich management platform is critical to a unified data management solution. Such a platform will provide a holistic view across your storage and backup solutions, giving you the data you need to optimize infrastructure utilization and measure application performance.

- **Flexible professional services approach.** Every business is different. To be successful, the transformation project and the end-result must be customized to your specific culture, organizational structure, and needs. Look for a professional services partner that utilizes a proven methodology, but is able and willing to customize the execution for your business.

So, which partner can you trust to maximize results and minimize headaches from your data management transformation engagement? For many businesses, the answer is HP.

WHY CONSIDER HP CONSULTING SERVICES FOR DATA MANAGEMENT

For IT leaders ready to transform their storage and backup processes into a holistic data management strategy, HP is a solid choice. As a visionary leader at the forefront of technology enhancements such as cloud, convergence, virtualization, and IT services, the company is well positioned to understand the current and future technology landscape.

Furthermore, HP's strong presence in most enterprise data centers means you can trust HP consultants to understand the real issues faced by the IT department. Unlike a general consultancy, whose practitioners may be more comfortable with PowerPoint slides than data center dynamics, HP knows how to communicate with stakeholders, from the CIO/CTO to the database administrator.

With HP Storage Consulting services, you benefit from a disciplined methodology customized to your business. Depending on your company's objectives, and where you are in your data management transformation initiative, HP consultants will help you design a vision, assess your current solutions, develop a roadmap, and help you integrate the solution or solutions into your environment. And HP's storage transformation services are vendor-agnostic; consultants will work with you to recommend the best solution to meet the goals you establish, whether using your existing infrastructure, from any vendor, or HP's latest technology.

HP Storage Transformation Services complement a full suite of IT consulting services structured around Advise, Transform and Integrate. These services include Storage and Data Protection, Data Migration Services, Software Defined Storage Services, Disaster Recovery Services and Big Data Solutions. Furthermore, because transformation is an ongoing effort, HP also offers a full suite of Transformation Experience Workshops to help your organization become "change-resilient"; that is, to learn how to become agile and responsive to the next market or technology change.

THE LAST WORD

Your company may be ahead of your competitors in adopting productivity- and revenue-enhancing applications, such as collaboration, social business, and big data analytics. You may have implemented the newest software-defined data center technology, and be an early adopter of cloud services. Your business may have fully embraced the vision of the "new style of IT."

But, unless you have transformed your storage and backup solutions, you are putting your company's valuable data assets at risk.

A strong data management strategy is the key to ensuring that your valuable data is simultaneously protected and accessible. Your strategy should protect your data during backup and recovery, providing insurance that allows you to securely maintain business operations without disruption, during any situation. It should also manage your data through multiple storage tiers, ensuring that data is available to users as needed, with optimal price-performance.

Transforming disparate storage and backup and recovery solutions into a cohesive, company-wide data management solution is not easy. This is why businesses depend on third-party experts such as HP's Storage Professional Services. HP expert consultants will work with your company to help you develop, implement, and manage a data transformation strategy that works for you.

You can't use the old style of storage and backup to support the new style of IT. Be sure your company is prepared for the future with a comprehensive data management strategy.

Lynda Stadtmueller

Vice President – Cloud Services
Stratecast | Frost & Sullivan
lstadtmueller@stratecast.com

***For more information about HP Storage Consulting services, click* here*.**

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