

Are You Ready To Outsource Your Storage?

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Today's IT environment is a massive vortex of mounting pressures and unpredictable fronts that make managing, protecting and ensuring the availability of corporate data an extremely daunting task. The increasing complexity of storage technologies, the unending surge in data growth and the unprecedented importance of data security and business continuity are but a few of the variables.

In the face of this gathering storm, it's no wonder many businesses are choosing to outsource their data storage and storage management. Given the escalating cost of managing storage and the very real resource constraints of today's IT organizations, the return on investment (ROI) for outsourcing is continually increasing, making it a practical business decision.

Here is a look at the forces driving the demand for storage outsourcing, what to expect if you outsource, and how to make smart decisions to make outsourcing work for you.

The Perfect Storm That Hit IT

Businesses are now facing what can be called a "perfect storm" of forces that is afflicting the enterprise storage-management landscape.

Explosive growth in enterprise data: Over the last few years, businesses have experienced explosive growth in data -- as well as the importance of that data -- without any signs of slowing down. International Data Corporation forecasted data growth to increase 90 percent through 2004.

Increasing complexity of storage technologies: Data growth and the need to manage it has spawned a glut of solutions that contribute to the dramatic rise in the complexity and cost associated with provisioning and managing storage environments.

Escalating storage management costs: Gartner Group estimates that the cost of managing storage is five to seven times the cost of purchasing the hardware. More specifically, more than 74 percent of storage costs cover management and administration, with only 12 percent going to hardware and capital expenditures.

Increased importance of data security and business continuity: Following global events that have painfully illustrated the consequence of data for today's businesses, data protection and business continuity have taken center stage in IT planning and boardroom conversations. Despite a general sense of vulnerability to acts of sabotage and disaster, the reality is that most data loss is caused by human error. According to a Wall Street Journal report, human error was the culprit in over 64 percent of all critical data lost.

Constrained IT resources: The downsizing of many IT organizations has caused a shift in the IT resource pool, replacing many storage specialists with generalists. As a result, many companies now rely on their storage hardware and software vendors and systems integrators for routine service and maintenance, further increasing ongoing management costs, and making it nearly impossible to predict or control future storage management costs.

The Market Swells

The market's response to these changing industry dynamics has been a wave of hardware, software and networking innovations -- all promising to increase data protection and reduce management complexity. Unfortunately, most IT organizations have difficulties keeping pace with these innovations, let alone being able to afford to implement them.

Not surprisingly, faced with the impossible task of balancing the urgency for improved data protection and business continuity versus the growing complexity of storage solutions, more and more enterprises are considering outsourcing for key storage functions, such as backup and restore; storage monitoring and management; primary storage, such as NAS and SAN; and remote backup and replication for business continuity. Many companies have already moved these storage functions outside the walls of their data centers and into the hands of storage specialists.

The reasons they cite are quite compelling, any one of which would make outsourcing a worthwhile investment:

- Improved operational effectiveness
- Increased data protection and accessibility
- Simplified enterprise storage environments
- More effective IT resources on revenue producing tasks
- Minimized capital expenditures
- Reduced labor costs
- Increased performance and availability
- Reduced risk

The single most important upshot of outsourcing storage: It literally turns storage management on its head. That is, companies choosing to outsource have made a fundamental shift in the way they view storage management. Instead of building out complex heterogeneous storage management systems and a staff to operate them, they simply manage service levels.

With outsourcing, enterprises can treat data storage management like a service, rather than a core business function. Consequently, companies outsourcing storage are better able to respond to business changes, report on performance, scale storage at will and reduce costs -- all while delivering better data protection and availability than they were able to do internally.

Hard and Soft Cost Savings

Although improved data availability and security are usually the reasons businesses stay with storage outsourcing, cost savings is typically the primary reason businesses initially look to outsource.

By outsourcing key storage functions, companies can realize hard cost savings in the areas of hardware and software procurement, labor and maintenance costs. Soft savings will result from better utilization of their existing IT resources with more revenue-focused projects, as well as better accuracy and predictability of storage costs and better flexibility to respond to evolving business priorities.

In particular, outsourcing reduces the costs of the single most expensive component to storage management -- labor. In most cases, storage outsourcing reduces labor costs by 25-40 percent or more over internal storage management. For instance, if a fully burdened backup and restore environment is currently costing \$12-\$14 per GB internally to manage, a 40 percent reduction in this item alone could reduce management costs by \$5-\$6 per GB, per month. For an average 5 TB environment, this amounts to \$25,000-\$30,000 per month in savings.

The Outsourcing Checklist

Here are some guidelines for deciphering the scope and services offered by providers. Keep in mind that selecting a storage service provider is about three things: Trust, Control and Flexibility.

Trust: Trust has to do with not only your confidence in the service provider's people, technology architecture and track record, but in their ability to help you more consistently and accurately predict your current and future storage costs.

- People, from sales and technical support to executive leadership. Are the right people accessible to you? Who is accountable to what they say? Do they consistently meet their commitments? Since people are always at the heart of a company, confidence in these people must be a critical guidepost in your decision.
- Storage architecture. Don't be overwhelmed by the large geographic and technological scale of a service provider's architecture. Instead, visit and inspect the provider's facilities to verify it offers the bandwidth, capacity and availability levels to meet your needs. Equally important, evaluate the storage infrastructure including the hardware architecture, storage management software and storage resource-management solutions.

Do their systems provide the availability levels you need across a variety of applications and systems? What vendor solutions are used in the architecture, what components are integrated and what levels of reliability do they offer? What is their geographic footprint for providing service? What performance levels can they offer? How secure, scalable and field-proven is the architecture? How many businesses does this system currently manage? How many transactions does it handle? What is the system's capacity?

- 24x7 monitoring and management. Because the pressures and impacts of downtime can mount very high very fast, verify that the service provider has the tools and network operations center in place to monitor, troubleshoot and resolve problems regarding maintenance and support of the services and infrastructure. Does it have processes and controls that are accessible for review? Does it

proactively monitor the health of infrastructure devices, overall system activity, events and tasks, and offer system-generated alerts for both customers and partners?

- Predictable storage costs. A reliable service provider should have the ability to consistently and accurately predict your current and future storage management costs. What are their fully burdened storage costs for services -- such as backup and restore, SAN and NAS, and remote backup and replication for data protection and business continuity? These should be measurable by the gigabyte, allowing forecasting of storage costs as your storage needs grow or spike over time.

Control: Control centers on your visibility of service performance and trend analysis, as well as the service provider's assurance to deliver services against a Service Level Agreement (SLA). In order to achieve this, the service provider must have the management systems in place to monitor, audit, manage and capture key system usage data that is then used for mediation, billing and reporting purposes.

Although these systems are often complex and proprietary, and managed through the service provider's operations center, they should offer visibility to users through a portal. The more capable these systems, the better the accuracy of customer billing, conflict resolution, storage-capacity planning and decision-making regarding storage usage, requirements and trends.

To ensure service quality, consistency and accountability, the service provider should offer SLAs covering all aspects of service operations, including tracking of capacity, availability and performance; capacity planning and management; escalation methods; communication paths; and change management.

SLAs will vary based on the reliability level chosen and the types of services you choose. The most critical point to understand is how the SLAs are backed. What level of documentation is available to familiarize yourself with how the service provider handles various scenarios and what is your role in this process? Are the SLAs financially backed?

Last, find out who is responsible for tracking and calculating SLA performance. If it is your responsibility to track, be sure they provide you with the tools to monitor and control SLA non-compliance and calculate your compensation -- again, keeping you in control of your storage needs and costs.

Flexibility: Make sure that the service provider has the range of services and responsiveness to keep pace with your changing business priorities. Business priorities are never static, so the key to selecting a service provider is their responsiveness to your changing needs, including temporary spikes in service, long term scalability, and a range of services covering the data protection and business continuity areas most important for cost control and maximum data accessibility.

In essence, it should not matter whether your data is stored in a data center or across multiple geographically dispersed offices; the quality and availability of the services should remain the same. Whether your goal is cost savings, reduced complexity, disaster recovery or business continuity, the service provider should have the flexibility to meet your foreseeable needs.

Navigating the Storm

In today's rapidly changing economic and technological markets, predicting the future with any degree of certainty is getting increasingly difficult. This is particularly true in the data-storage market where the 'perfect storm' of forces is creating increased complexity and uncertainty. As a result, planning for and responding to business and IT demands for increased data accessibility, improved data backups and recovery, and improved effectiveness with dwindling IT budgets needs to be re-evaluated.

Outsourcing key storage functions is a cost-effective and compelling business decision, when you consider the pain involved in building and managing storage systems -- all the while navigating through the 'perfect storm' of forces. Companies can reduce hard costs up to 40 percent over internal storage management, and improve operational effectiveness and increase data quality and consistency while simplifying and streamlining the management of complex enterprise-storage environments.

In turn, outsourcing allows businesses to re-allocate critical IT resources to revenue-producing tasks and eliminate or reduce capital expenditures associated with storage.

Frank Brick, July 30, 2003

Gartner Group: www4.gartner.com/Init
International Data Corporation: www.idc.com/