

FROM OUTSOURCING TO **SELECTIVE SOURCING**

Considerations for sharing the IT load through
flexible managed services for storage

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Table of Contents

Executive summary	1
More efficient storage management	2
Lower risk	3
More predictable cost structure	4
Ability to implement charge-backs	4
Greater control of IT	4
Conclusion	5

Executive summary

A significant percentage of the Fortune 500, including GM, Proctor & Gamble, Blue Cross, and Xerox outsource their entire IT departments to a third party. Most cite the same reasons: outsourcing IT allows them to focus with less distraction on their core businesses, create a more predictable cost structure for IT services, and reduce the legal risk and expense of regulatory noncompliance, incomplete backups, slow or ineffective disaster recovery, unplanned downtime, spotty data availability, escalating storage costs, and other characteristics of inefficient IT environments.

These are strong arguments for outsourcing versus maintaining all IT staff and infrastructure in-house. But for all its advantages, outsourcing IT is not without its drawbacks. When a company shifts its entire IT operation to a third party, the host company loses direct control of its computers, technical staff, even management of its datacenters, almost always under multiyear contracts that can extend for up to 10 years. The loss of in-house expertise is significant. IT experts may still work in the same building, but having been redeployed, they're typically unavailable to help with strategic planning, business integration, or emerging legal and technical priorities.

That's why a growing number of companies that previously switched from insourcing to outsourcing are now canceling contracts and bringing at least part of their IT ownership back in-house at incredible expense. One example is JP Morgan Chase, which canceled a \$5 billion outsourcing agreement with IBM Global Services, choosing instead to rebuild its in-house IT environment with new staff and infrastructure.

For companies worldwide, selective sourcing (also known as out-tasking) provides a compelling alternative to insourcing and outsourcing. Selective sourcing allows companies to retain ownership of their own IT department but offload specific tasks such as disk management, SAN provisioning, backup/restore, or storage management to a third party. In this way, they fill specific gaps with storage experts while still participating strongly in IT management. Selective sourcing has gained traction as a viable model, as evidenced by the number of companies that now out-task their backup processes or turn to a third party to manage a disaster recovery hot site.

This paper focuses on the five most compelling attributes of selective sourcing, and discusses some behind-the-scenes considerations that factor into any evaluation of a shared storage management model.

More efficient storage management

Each year, organizations have approximately 30 percent more data to manage than the year before (Horison Information Strategies, September 2006). If IT staff and budgets are not growing by the same amount each year, then there's a growing gap between the data that needs to be managed and the people and infrastructure required to manage it. Selective sourcing helps close the gap by creating a more efficient operating environment, so IT departments are better able to handle an increased workload without increasing IT staff. Some considerations:

- **Technology refreshes are prenegotiated.** More and more data means there's constant pressure to upgrade the SAN environment with new fibre switches, more disk, state-of-the-art encryption technologies, and more. These upgrades happen automatically as a normal part of the technology refresh cycle in most selective sourcing agreements. Working with a third party eliminates the need to maintain the expertise in-house or divert IT resources from other tasks to implement new storage technology.
- **Storage capacity is pooled.** To enable remote storage management, most third-party service providers virtualize the storage environment. Through virtualization, disk and tape arrays from all vendors can be viewed as part of a single, virtual pool of storage. This revolutionizes how IT departments allocate disks for greatest efficiency. As individual arrays fill up at varying rates, unused islands of storage capacity across the organization can be tapped transparently. The painful process of reprovisioning storage or migrating data to replacement arrays is avoided. A new disk is added only when it's truly justified, so capital expenditures are deferred. And when migration finally does need to happen, it's faster, simpler, and handled by the service provider, who takes responsibility for implementing and maintaining all virtualization hardware, including SAN switches and specialized appliances. The provisioning and migration process is practically transparent to the host company.
- **Thin provisioning becomes feasible.** According to industry estimates and Sun's experience with storage customers, storage utilization rates for most companies hover in the range of 25 to 40 percent. There's clearly a lot of unused storage capacity—and a lot of unnecessary disk purchases—in the typical enterprise. Thin provisioning helps companies avoid prebuying for future capacity, and instead takes a just-in-time approach to storage provisioning. With thin provisioning, a single pool of disk can be automatically allocated to keep pace with applications as they grow. Disk spindles are not bought for the application, but rather are purchased to replenish the free pool as capacity shrinks. It happens on a predictable basis, making capacity planning much simpler. With thin provisioning, disk usage climbs from approximately 60 percent up to about 90 percent, so very little disk capacity is lying dormant at any given time. That means there's less unused storage capacity to buy, manage, and maintain.

- **Storage performance can be tied to SLAs.** It's 2:00 a.m., do you know where your backup routine is? Do you know your overall monthly success rate with backups? Do you know how storage is provisioned across the enterprise, or where the excess capacity is hiding? With Storage Resource Management (SRM) tools, which are a standard part of selective sourcing engagements, third-party providers can regularly report status on storage utilization, provisioning, and backup success rates. Selective sourcing contracts often include predefined Service-Level Agreements (SLAs), so the performance of the service provider is tied to the performance of storage. This allows both to be measured in a concrete way, and assures a high degree of accountability. The best third-party arrangements impose penalties on the service provider if SLAs are not being met, so executive management teams have a degree of assurance that the storage environment is meeting the business-critical needs of the organization.

Lower risk

IT failures happen in public. On a weekly basis, it seems that headlines shout the story of stolen customer databases, lost credit card numbers, misplaced disks and laptops, indictments for questionable accounting procedures, and on and on. Given the legal and financial stakes, as well as the potential risk to customer confidence levels, it's surprising that any IT professional can sleep through the night. Selective sourcing helps minimize or eliminate many of the risks that are inherent in any rapidly growing data environment.

Some considerations:

- **Backups and restores are faster and more reliable.** Most companies agree that unplanned downtime is incredibly expensive. What's more, ongoing studies and articles from industry analysts indicate that backup and recovery processes continue to be among the top pain points in today's businesses. Given that, it's incredible that some companies still consider backup and restore to be a low-level position in the IT pecking order. A selective sourcing arrangement allows specialists to handle backup and restore operations under SLAs that can routinely achieve a 98 or 99 percent success rate for backups while also specifying a guaranteed time frame for file system restores. IT departments do not have to wait for a disaster to discover the true recovery time for their business.
- **Compliance is improved.** Inspired by the meltdown of Enron, Arthur Andersen and other bellwethers of the late 20th Century, the Sarbanes-Oxley Act of 2002 (SOX) established strict disclosure standards that affect reporting, accounting, and auditing in IT operations. SOX mandates that certain classes of data must be archived for seven to ten years, which places the onus on IT departments to deploy advanced encryption and Write Once Read Many (WORM) technologies at many places within the storage infrastructure. These requirements place a huge expense as well as a significant learning curve on most datacenters. Selective sourcing gets a third-party

specialist involved to consult, help avoid mistakes, and make sure the compliance solution is as cost effective as possible. Selective sourcing also treats compliance under an SLA, so IT departments have a clear confirmation of what requirements are being met, and a better understanding of the process for meeting them.

- **Security is layered.** In all areas of data transmission, whether disk to disk, disk to tape, or tape to vault, the ability to encrypt data and manage the keys is paramount. Selective sourcing allows datacenters to integrate mutually reinforcing layers of security controls throughout the IT architecture. These protocols are provided as a normal part of the sourcing agreement, so no additional training or staff is required in the datacenter.

More predictable cost structure

Selective sourcing helps avoid expensive surprises that are commonly triggered by compliance activities, troublesome backup and restore routines, unplanned downtime, data availability glitches, and myriad other wrinkles in the datacenter. By definition, selective sourcing is selective, and covers just part of the IT environment. But the part that's covered under a selective sourcing agreement has the advantage of cost certainty, so costs for specific line items in the IT budget are known for up to three years in advance.

Ability to implement chargebacks

Third-party service providers determine their fees by placing a per-gigabyte charge on managing disk storage or handling backup routines. This provides a great opportunity for the host company to implement chargebacks within the organization. With chargebacks, individual business units and users are cross-charged for the storage and data services they use, so the profit centers that place the biggest demands on the IT infrastructure are charged accordingly. Most companies see lower overall IT expenses as a result. When business units are charged for the storage they use, they have an incentive to better manage costs and look for ways to reduce expenses. Conversely, if they're not charged for what they use, there's no incentive to save. Chargebacks have proved to be one of the most effective ways to control IT costs and better leverage existing storage investments.

Greater control of IT

The hard truth is that most IT departments for large companies either do not operate under Service-Level Agreements, or operate under SLAs that are relatively toothless. Engaging a third-party service provider requires that SLAs be published, signed, and honored as part of a written contract. Third-party service providers begin an engagement by evaluating areas such as disk provisioning, data availability, tape backup, and regulatory compliance. This due diligence determines a fee structure, and determines whether remediation efforts are needed before an SLA can be guaranteed. Throughout the engagement, the service provider takes the responsibility to certify to the IT

sponsor that the SLAs are being delivered; the IT department can in turn certify the results to internal stakeholders. For most IT departments, this is a true breakthrough in controlling how IT services are delivered and reported.

Another major area of control in a selective sourcing agreement comes from the retention and/or redeployment of existing IT staff, infrastructure, and expertise. Selective sourcing means that third-party service providers are an adjunct to, not a replacement for, the in-house IT team. Unlike full outsourcing contracts, managed storage assignments can be undertaken quickly and smoothly, with no disruption to operations. Then, if an IT department's priorities change, it can readily bring storage management back in-house, without re-building the IT staff and infrastructure from scratch.

Conclusion

It pays to be selective

Organizations worldwide paid \$29 billion for managed storage services in 2006 (IDC, Worldwide Storage Services 2007-2011 Forecast, May 2007). That's a lot of specialized help for IT departments worldwide, but it's warranted given the advantages of selective sourcing, including:

- **Lower IT and storage costs** – Selective sourcing can facilitate virtual storage and thin provisioning, so companies utilize more of the storage capacity they already own. Plus, the third-party service provider may own part of the storage infrastructure, reducing or deferring capital expenses for the host company. IT costs are further controlled since current staffing levels can be maintained, even as storage volume and complexity continue to increase.
- **Improved compliance** – Organizations that selectively source with a third-party service provider have greater confidence that their backup, archiving, and security methods comply with federal mandates.
- **Higher IT value** – When storage duties are outsourced, so are many IT headaches. Instead of always fighting fires, IT staff can focus on strategic activities that help the company's top-line growth.
- **Better business alignment** – A selective sourcing contract is a master Service-Level Agreement, so individual SLAs can be aligned with the needs of the business. As needs change, the SLA and related costs can also change. And with selective sourcing, services can be charged back to business units and users, so the costs are covered by those who create the demand.

The bottom line is that even the best IT departments can use some help in a few key areas. Selective sourcing is often the easiest way to augment limited IT staff with specialists who understand the increasingly complex and specialized discipline of storage management. For organizations worldwide, this middle path between outsourcing and insourcing is the most efficient use of time, budget and resources.

