

LEVERAGING YOUR UNTAPPED STORAGE

Most companies have massive amounts of unused and underutilized storage scattered across their enterprise. A recent study of 200 organizations found that 15 percent of all storage was allocated but never used; another 10 percent was left behind when the server was moved, and 40 percent of storage had not been referenced by an operating system for six months.*

That's a lot of waste – of resources, of IT time, and of money.

“Increasingly, it is clear that IT can no longer afford to host discrete applications across discrete hardware for discrete organizations,” says IDC analyst John Humphreys in a recent white paper.*

Enter storage optimization.

This is a process of visualizing, accessing, and relocating the valuable wasted resource of your untapped storage. This allows the enterprise to look at its data as a single entity, rather than scattered silos. The benefits are wide-ranging:

- Data is no longer wasted.
- You can always visualize the amount of data you have.
- Data management is simplified and automated.
- You can align your storage plan with business needs, processes, and technology.
- The potential for security breaches, compliance issues, and backup problems is reduced.
- You can defer unnecessary capital expenses.
- IT is freed from fighting fires and can move from a reactive to a proactive stance, spending time on more strategic issues.

MORE EFFECTIVE USE OF STORAGE

Capturing and using your untapped data brings all sorts of performance benefits, as well, since the process not only releases more storage but helps you put a structure into place for using your storage in the most effective way possible. An optimized storage environment includes Service Level Agreements (SLAs), allowing IT to improve price/performance measurements over time.

For example, Physicians Mutual®, an insurance provider, used storage optimization to speed backups by 50-75%, make disaster recovery 75% more reliable, and dramatically lower overall storage costs.

Humphreys calls the current optimization landscape “Virtualization 2.0,”* as companies leverage consolidation for ever-more-strategic purposes, including lowering operational expenses, improving service levels, and responding faster and better to changing business needs.

It's important to keep in mind storage optimization is not a one-size-fits-all process and must be carefully designed to the specific needs of your organization, depending on your priorities regarding flexibility, manageability, and other important considerations.

“There is a growing recognition among customers of the need for diversity in how they virtualize or decouple the application stack from the underlying hardware,” Humphreys wrote. “Different applications have different requirements in terms of isolation, flexibility and performance. Having the right virtualization tool for the job is as critical as choosing the right hardware platform.”*

FIVE-STEP APPROACH

Leveraging your untapped storage requires a reference architecture and deployment standards to control the environment. This should be regarded as *process* that develops over time. Sun Microsystems™, a leader in providing technology for virtualization and storage consolidation, provides five recommendations for launching into the process.

1. **Define Business Requirements.** The first step is to talk with all stakeholders and develop a strong understanding of all the issues that will affect the storage strategy, including customer expectations, compliance, and competition. The key is to develop a measurable program around availability, and uptime levels, disaster recovery speeds, and other pertinent metrics.
2. **Assess Current Storage.** By identifying business requirements and SLAs, you can quantify the short-term, mid-term, and long-term ROI for redeploying storage assets. By coupling this with the resources, time, and effort the project will require, you can plan your strategy to eliminate waste.
3. **Tier, consolidate, and simplify.** A centralized strategy will make it easier to control and manage storage centrally, using standardized IT platforms, tools, and interfaces, allowing you to find pockets of unused data. Currently, 40 percent of companies have just two tiers for their storage, meaning they typically have low-value data on expensive media. By increasing the number of tiers, you can allocate data to more appropriate media, slashing costs and reducing backup burdens. By grouping storage in a centralized, virtualized environment, the entire storage environment can be viewed easily, allowing you to use every byte.
4. **Define service levels.** Not all data is equally valuable or needs the same level of protection – and the value of data changes over time. Too many companies have outdated reports still classified as important information that is kept on expensive media. By classifying information appropriately, the business units can determine the correct level of availability, allowing them to switch to lower levels of protection at a lower cost where appropriate.
5. **Monitor, manage, provision.** Automatic monitoring and reporting capabilities makes data trackable across applications, platforms, departments, and vendors. As a result, you can have more efficient operations through better management and accurate charge-backs on a pay-per-use basis. This gives business units an incentive to use lower levels of services where appropriate, since they share in the savings.

Imagine if you took two twenty-dollar bills out of an ATM and then threw one of them away. That, in effect, is what many companies are doing with their storage. The information stored on computer systems is doubling every year, and the cost of managing storage is now nearly as much as the cost to buy it. With storage utilization rates running at only 40 to 60 percent, 50 cents of every dollar spent on storage may be wasted.

To see the payoff of storage consolidation in practice, let's look at KnowledgeBase Marketing®, a subsidiary of one of the world's most comprehensive communication services organizations with 2,000 offices in 106 countries. They are a prime example of the benefits of taking a methodical approach to consolidating multiple storage platforms. Following the recommendations of the Sun Professional

Services assessment, KnowledgeBase implemented a “blended” storage model that consolidated storage for its open systems platforms across two tiers. Results: 40% reduction in storage TCO, 50% reduction in storage administration time, 3X improvement in I/O throughput, and 86% reduction in transaction costs.

Companies in a diverse array of fields – energy, media, and education, for starters – have reported similarly impressive benefits from their own Sun storage consolidation efforts.

To fully benefit from storage optimization, you must approach this as a methodical exercise. The right approach to optimization can result in a system that provides the correct degree of flexibility, availability, and security for your specific needs. But it is crucial to use the step-by-step approach, in order to create a storage infrastructure that can both meet your needs today and respond rapidly to changing business requirements in the future. The Sun Partner community can provide the expertise, experience, and access to cutting-edge technology that can guide you through the steps to improve your storage infrastructure and turn it into a competitive advantage.



Written by: Joe Mullich, Vela Alegria Consulting Group, LLC

Referenced Material:

* Humphreys, John. Sun Microsystems' Solutions for Virtualization Across the Enterprise. August, 2007.
http://www.sun.com/datacenter/consolidation/docs/IDC_SystemVirtualization_Aug2007.pdf

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