

Mastering Storage Complexity



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SIR WINSTON CHURCHILL once described Russia as a “riddle, wrapped in a mystery, inside an enigma.” Today, one could apply that label to the nebulous area of storage management — specifically the management in a storage-area network (SAN) environment. Virtualization (or SAN), in various guises, has been around since mainframes ruled, but virtualization across a heterogeneous mix of storage devices and servers in a distributed SAN is a recent twist and a puzzling one at that. The basic premise of virtualization is simple enough: create a single pool of storage from multiple devices that can be allocated to servers as needed.

INTRODUCTION

In 2002 the hardware storage industry experts said that there is value in virtualization. The approach, they said, will improve disk utilization, improve SAN management and provide the ability to mirror expensive storage devices with cheaper disks.

However we have found the following to be closer to the truth

Data center complexity in today’s enterprise continues to grow at a dizzying rate. Data volumes are doubling almost every year, while storage utilization rates hover at 33%. And data is needlessly duplicated – CMP Media Research estimates by as much as 50 to 500 times. Consequently, space, power, and cooling issues are growing in severity.

That’s the bad news. The good news is that new technologies are available to help IT gain control of complex storage environments. A new generation of backup, recovery, and storage management solutions allow organizations to unlock the potential of disk-based data protection, get full visibility of what’s in their diverse storage environment,

optimize their storage utilization, and get on the path to running storage as a service.

THREE BIG PROBLEMS

The thorny storage issues described above can be traced to three root problems:

- **Platform problem** Virtually every data center in the world has multiple operating systems, chipsets, virtual machines, arrays, and so on. And each one of these platforms typically has management tools that run only on that particular platform. That means that if an organization wants to run a heterogeneous data center, it's forced to deal with dozens of disparate tools, and literally hundreds of thousands of possible combinations of infrastructure. As the complexity in a data center worsens, IT's ability to meet aggressive service levels within severely constrained IT budgets becomes almost impossible.
- **Administration problem** To deal with this complexity, many enterprises take the short-term step of creating isolated "islands" or "silos" of storage – something they can get their arms around. The trouble is, these islands start to proliferate, and each one grows until the problem becomes much worse. The result is no central visibility into the overall storage environment, which means you can't manage it well. Which, in turn, is why utilization rates are so low.
- **Business problem** Currently, there's a yawning gap between the storage team and the business team. Too often, it's as if business owners were on the deck of a ship next to the wheel, shouting storage demands – with little understanding or awareness of, or accountability for, the impact of what they're asking for. All they know is that someone is down in the engine room, shoveling more coal into the boiler. It's a situation that leads to inflated demands, unrealistic timeframes, and storage that is a reactive cost center rather than a true partner of the business.

To help enterprises tackle storage complexity, Symantec recently introduced Storage United. Storage United enables enterprises to simplify the management of the most complex,

heterogeneous data center environments. This enables them to unite their diverse storage platforms, to unite isolated islands of storage administration, and to unite storage operations with IT business objectives.

At the core of Storage United is the idea that a software – rather than a hardware – approach should be used to resolve the root causes of today's storage problems. Using Symantec storage software, enterprises can:

- **Unite platforms** – because with no hardware agenda, Symantec supports virtually everything in the data center.
- **Unite administration** – because it empowers the administrator to actively manage rather than just passively monitor – and provides full visibility across the entire data center and remote offices.
- **Unite the business** – by enabling IT to truly deliver storage as a service.

The premise behind Storage United is straightforward: Understanding your current environment is all about visibility. You must be able to see everything you have, across all platforms and data centers. Once you can see everything, you can manage it more effectively and efficiently by taking steps

to drive up utilization, concentrating on improving operations, and finally delivering storage as a service by establishing different levels of service, delivering them, and tracking and measuring them.

THE CORE TECHNOLOGIES THAT DELIVER THE PROMISE OF STORAGE UNITED ARE:

- **Data protection** (NetBackup, Backup Exec) – provides consistent, reliable protection of your data while simplifying data protection.
- **Storage and Server management** (Storage Foundation, CommandCentral Storage, and Server Foundation) – gives data center managers the infrastructure software foundation needed for effective operations and sustained growth.
- **Archiving** (Enterprise Vault) – provides an intelligent archiving platform that stores, manages, and enables the discovery of corporate data from email systems, file server environments, instant messaging platforms, and collaboration and content management systems.

A key element of Symantec's Storage United initiative is to provide a layer of data protection, storage management, and archiving software that supports every major server and storage system in the data center. Because Symantec has no hardware agenda, organizations have control over their storage and server architectures and hardware purchases.

CONCLUSION

Storage continues to grow at an alarming rate, while available floor space, power and cooling, budget, and skilled staff are becoming troublingly scarce. Enterprises need a practical path for getting a handle on these increasingly difficult storage environments while, at the same time, also controlling costs and improving service levels.

Symantec's Storage United initiative is designed to help enterprise storage professionals address the root causes behind the growing cost and complexity of their storage environments. It offers a convincing argument for uniting and integrating data center storage with business requirements.

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