



IBM Storage Virtualization—Value to you



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The IBM TotalStorage® SAN Volume Controller (SVC) is designed to deliver significant value to organizations facing the challenges of today's explosive growth in information. This paper summarizes how SVC can help you address challenges in your storage environment. This paper also illustrates how SVC can deliver value, and provides examples of real client experiences.

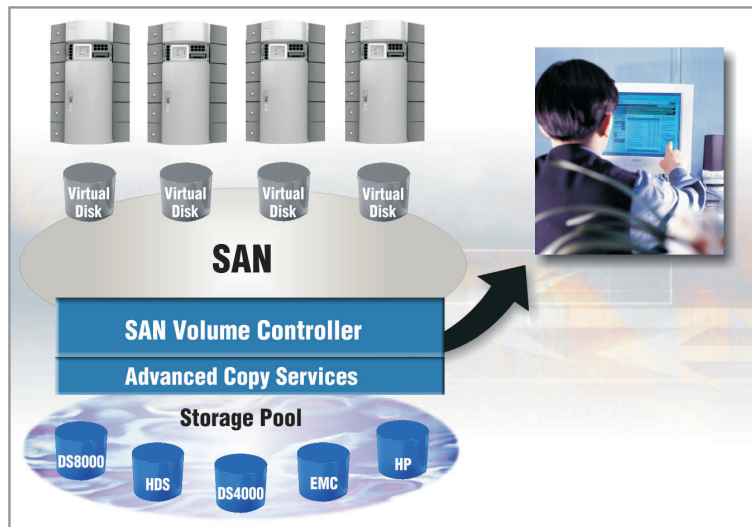


Figure 1 - SVC helps combine capacity from different storage systems, helps provide common copy functions and enable data movement without server disruption, and is designed to support management of diverse storage from a single point.

1. SVC can help keep your applications running.

Today, organizations often have to take their storage offline to migrate data or change the storage infrastructure. These actions interrupt applications accessing their data, which increases application downtime. Analysts estimate the cost of this downtime can be as much as \$2,000,000 per hour, depending on the industry. In addition, in order to migrate data, for example, from one vendor's array to another, you may need to obtain specialized services—at high rates because of the skills required.

SVC is designed to help you avoid the need to take your storage offline. SVC's data migration capabilities support continued access to data while data migration and storage infrastructure change is occurring. Continuous availability of data for applications can help you to avoid the cost and impact of downtime. In addition, SVC is designed to work with IBM TotalStorage Productivity Center to help automatically allocate more capacity to an application that needs it, again helping your business to run without interruption.

2. SVC can help reduce the cost and complexity of your storage environment.

SVC can help you take advantage of the cost savings of midrange storage while achieving the benefits of enterprise storage. Since the cost of midrange storage can be up to 50% less than enterprise storage, this can be a significant amount. SVC allows you to create tiered classes of storage to help you use the most efficient type of storage for the types of data you're storing. SVC is designed to provide robust attributes of enterprise storage across the entire virtualized environment.

In many environments, organizations have different types of storage that are managed in different ways and that have different functions (such as EMC TimeFinder, Hitachi ShadowImage, or IBM FlashCopy®). To manage these different systems requires developing many sets of skills. In addition, organizations may develop automation based on one of these functions. If they do, they may be unable to move data from one system to another because the applications using that data become 'tied' to the functions on one box, reducing choice among vendors and reducing flexibility in using storage systems.

SVC is designed to provide a single place to manage multiple, different disk systems. It also provides a common set of functions that are designed to work in the same way regardless of the disk system type. In this way, SVC can help avoid vendor lock-in and reduce management complexity, both of which can help you reduce storage costs.

Our client Cineca, Italy's largest high-performance computing (HPC) research center used SVC and DS4500 storage to reduce their storage costs 10% in their first year.

3. SVC can help make your people more productive.

SVC creates a virtualized pool of your heterogeneous storage environment. By executing storage management tasks for the entire pool from a central point, SVC can help storage administrators become much more productive. They only have to learn one interface, and there are fewer tasks to execute because the action can be taken across the virtualized pool. Together, these can generate additional operational savings.

Safelite Glass Corporation, a large North American auto glass service company, saved approximately \$460,000 using SVC in the first year. They were able to accommodate more than a 500% increase in storage use without an increase in staff.

4. SVC helps you utilize storage assets more efficiently.

It is often estimated that many organizations are only using their storage assets at about 25 to 50% capacity. SVC is designed to help organizations significantly improve their utilization by combining the storage capacity from many disk arrays into a single storage resource, which storage administrators can manage from a central point. Administrators no longer need to keep spare space available for each individual server in case it is needed. Rather, they have a shared 'pool' of space that is shared among all servers and so it can be smaller.

SVC also applies copy services, such as point-in-time copies and replication across disparate storage arrays to further help you increase the utilization of your assets.

The City of Richmond, VA government uses SVC to manage its EMC and IBM storage environment. It increased its storage utilization 45%.

Each of these SVC value statements stands by itself, but when you look at our client examples, you can see how SVC can help:

1. Lower the total cost of storage hardware
2. Reduce management costs
3. Increase application availability
4. Increase disk capacity utilization

... it's an even more compelling value proposition.

Did you know?

- *IBM has almost 40 years experience in virtualization technologies*
- *More than 1,900 SVC systems have been implemented with clients worldwide*
- *SVC is designed to support up to 99.999% availability*
- *SVC has one of the fastest industry-standard storage performance benchmarks recorded for any disk controller¹*
— *<http://www.storageperformance.org/results/>*
- *15PB of client data are managed today by SVC and growing!*
- *SVC supports the virtualization of non-IBM as well as IBM storage (Including EMC, HP, HDS, Sun, and Dell).*

SVC delivers significant benefits to IBM clients today. IBM has over 1,900 clients using SVC. These clients are in many different industries around the world but they all realize the same basic benefits we've discussed above.

For more information

Contact your IBM representative, IBM Business Partner or visit:

ibm.com/storage/software/virtualization/svc/index.html

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¹ SPC Benchmark 2™ V1.0, Executive Summary, Submission Identifier B00001, IBM TotalStorage SVC 3.1, January 16, 2006.



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MB, GB and TB equal 1,000,000, 1,000,000,000 and 1,000,000,000,000 bytes, respectively, where referring to storage capacity. Actual storage capacity will vary based upon many factors and may be less than stated. Some numbers given for storage capacities give capacity in native mode followed by capacity using data compression technology.

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