

Sparkassen Informatik |

Banking on a Highly Available Storage Network

The Business

Sparkassen Informatik is the largest provider of IT services for Sparkassen Group, a German savings and loan institution. It supervises more than 250 Sparkassen banks in Baden-Württemberg, Hessen, Nordrhein-Westfalen and Rheinland-Pfalz with an average balance sheet total of more than 500 billion euros – a market share of over 50 percent. Its other customers include companies in the S-Financial Group such as state building societies and insurance companies. The services offered by Sparkassen Informatik cover the entire spectrum of information technology, from the development and provision of IT applications, networks and technical infrastructure through consulting, training and support all the way to the operation of computer centres.

For more information regarding Sparkassen Informatik please visit <http://www.sparkassen-informatik.de>.

The Challenge

Sparkassen Informatik required a storage solution providing high availability of data and reliable backup at the same time. Critical to the new infrastructure was the deployment of two SANs (Storage Area Networks) in two of the company's data centres. While deployment of the SAN itself was relatively successful, Sparkassen Informatik identified two key areas concerning the management of Windows server systems where the SAN was proving to be inefficient as a solution on its own: first it was too costly to manage and secondly the utilisation rates of the underlying storage was too low, resulting in a frequent need to move data around to increase partition sizes to meet ongoing storage demands.

The Solution

Sparkassen Informatik decided to implement a SAN management tool that could address these issues and create an environment to meet future demands. IBM introduced DataCore's SANSymphony™ to Sparkassen Informatik as a means for implementing such a solution without requiring any changes to the underlying SAN.

SANSymphony is used to provide virtual volumes to about 30 Windows servers running various applications including an Oracle based document archiving system, email and file servers. By exploiting SANSymphony's Network Managed Volumes (NMV) feature, storage utilisation has increased from about 50% to over 85%, representing a significant saving in storage costs. Combined with the reduced management that NMV based automatic storage provisioning delivers and the high availability provided by network mirroring and alternate path failover technology, SANSymphony addresses the key management requirements for Sparkassen Informatik. "Today function and value in a storage environment is significantly provided not just by hardware but also by software," says Matthias Walter, Manager, Windows Server Systems in Münster, "with SANSymphony we can take advantage of this value today and in the future independently of hardware developments."

Sparkassen Informatik at a glance:

Business -
Largest IT-service provider for Sparkassen Group in Germany.

Main Requirements -
High availability of data, increased utilisation of storage, centralised and improved management, reduced costs.

Environment -
IBM ESS storage, Inrange AX 91 128 port SAN switches, Windows application servers running specialised banking applications, Lotus Domino, File and Web services.

DataCore Solution -
SANSymphony Network Edition, Network Managed Volumes, Network Mirrors, Alternate Path

Business Solutions Powered by DataCore™

An interview with Matthias Walter, Manager, Windows Server Systems, Sparkassen Informatik, Münster

What changes have you noticed in the way storage is managed today?

In the past 2 years there has been a change in the way storage is viewed by organisations such as Sparkassen Informatik. Previously, for us, concern was mostly focussed on backup of critical data at a server level, based on local dedicated storage pools for each server. This approach has become inefficient in both operational and resource usage terms. Consolidation of storage and servers can be a means of improving matters, assuming the right practises are put in place to take advantage of it.

SAN technology has enabled us to mirror data between our data centres over long distances providing opportunities to address backup and disaster recovery requirements in a more intelligent way. SAN alone is not sufficient, however, and it is the functionality of network based storage software such as SANsymphony that now provides the flexibility to make the most of the SAN infrastructure.

Why did you select SANsymphony to manage your SAN?

We did investigate alternative solutions, but only implemented SANsymphony. It satisfied us on the two aspects we required to proceed to evaluation. First it provided a solution to our specific technical requirements. Secondly, it was recommended by IBM, our prime supplier for the SAN infrastructure. As our infrastructure is IBM based any solution had to be compatible with this.

In all the selection process took about 2 months, with IBM partner RZ Net providing the solution. Following this we tested the environment for about 3 months before migrating our first production server to SANsymphony storage and running it for about a month while operational aspects were analysed. We are now using SANsymphony virtual volumes on about 30 of our production Windows servers, all of which require large volumes of storage for their data. Migration to the production environment took approximately 3 months.

What is your environment? How are you using SANsymphony?

Our SDS (Storage Domain Server) nodes are IBM x360 servers, of which we currently have two but are planning to deploy two more.

SANsymphony is used to synchronously mirror about 5 TB of IBM ESS storage between two of our data centres over a long distance. We use

Inrange 128 port SAN switches. Because high availability is critical to our customers, we use DataCore's alternate path module on all the application servers so that automatic failover between the two data centres can be provided in event of a failure. Network Managed Volumes help us to improve storage utilisation, with figures of as much as 85% now achievable compared with the previous 50%. NMMVs also help improve availability as additional storage required by applications is automatically supplied without downtime or manual intervention.

All the servers using SANsymphony managed virtual volumes are running Windows and host various applications both for our customers and for our own internal systems. For example specific banking applications, SQL, Oracle data base applications, Lotus Domino servers, Microsoft SMS services and file servers.

What do you think are the key benefits to Sparkassen Informatik of using SANsymphony?

The biggest single advantage to us has been the significant increase in what we call the storage 'fill rate' or utilisation. An increase from 50% to over 85% represents an enormous saving for us in terms of deferred storage acquisition. SANsymphony has also helped us to more fully exploit our original investment in the SAN infrastructure by providing an improved management view of the whole environment. The flexibility provided enables us to respond to change very effectively. In our environment data volumes change very quickly. We can now meet these changing demands easily.

Another benefit is the ability to source disk storage from any vendor and of any class. We are no longer restricted in our choice of storage hardware and are able to bargain more effectively with hardware vendors when acquiring new storage.

Finally, availability for our customers is vital. With the SANsymphony configuration we have implemented we can ensure that even a major catastrophe at the primary location will not affect end user access to the system as synchronous network mirroring and the alternate path modules will provide real time, automatic failover.



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