SPIEGEL Verlag achieves High-performance Data Mirroring with SANsymphony from DataCore

DER SPIEGEL
Das deutsche Nachrichten-Magazin

About SPIEGEL-Verlag:

SPIEGEL Verlag is a media company based in Hamburg. Its products are marked by the outstanding quality of its journalism and the independent nature of its reporting. Der SPIEGEL, Europe's highest circulation news magazine, was founded in 1947 and represents the very best in investigative journalism.

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SPIEGEL Verlag has selected SANsymphony from DataCore for the centralised management of several hundred TB of data sets in their heterogeneous storage environment. The move toward software defined coincides with hardware reaching end of life together with the integration of SanDisk flash memory to enable the Hamburg-based media company to enhance the performance of its business critical systems whilst providing for greater flexibility in meeting future needs.

About the company: SPIEGEL Verlag

Together with SPIEGEL ONLINE, the leading news site in the German-language internet, SPIEGEL reaches over 12 million people each week - on paper, online or via mobile devices. The Group's other journalistic products include manager magazin, a monthly business magazine targeted at decision-makers and managers, and SPIEGEL TV, whose programmes have established a strongviewing position. In 2014, the SPIEGEL Group, which employs a staff of around 1100, generated sales of almost €285 million.

Information technology has a pivotal role to play in the publishing house's business operations. Spiegel Verlag can draw upon a digital archive comprising millions of multimedia files, images, articles and documents from the fields of print and online media, books, as well as film and television productions. As numerous production and publication processes within the operation have been automated, any failure in making content available could result in losses amounting to millions of euros.

The challenge: high availability with efficient tiering design

Besides traditional business applications (email, FTP, databases) and applications specific to the publishing sector, IT systems management at the Hamburg-based company also provide 24/7 high-performance availability of archive material alongside comprehensive production data. In addition, there is a high demand on offering flexibility in order to ensure quick and efficient availability of server/storage systems for short-term projects. To address the need for flexibility, a virtual software-based storage virtualisation product had already been utilized some years ago in the form

of two redundant aligned data centre spaces that are operated as fail-safe 'stretched clusters'. But due to the increasing maintenance problems associated with this storage solution, IT managers expedited plans to replace this platform.

"In the end, DataCore SANsymphony proved to be the most appropriate platform for us. Besides excellent cost-effectiveness and the overall efficiency of the SSD integration, we were particularly impressed by the fact that we could certify our free Linux distribution CentOS for DataCore. That's what we call a customised solution – it's absolutely brilliant!" says Robert Kiehne, Group Head for IT System Management at SPIEGEL Verlag.

The solution: DataCore's high-performance with flash memory from SanDisk

As per the proposal, the next step in the install involved the transition to DataCore software and the replacement of the hardware platform used for the storage server. SANsymphony10 was installed on each of the latest generation Fujitsu Primergy servers, distributed to data centres in the 'stretched cluster' and redundantly connected to the fibre channel infrastructure. A flash PCIe card from SanDisk's Atomic series was integrated into each of the DataCore nodes.

While the SanDisk cards serve as top-speed "tier 0" storage classes, an external SSD appliance and other SAS and SATA disk storage systems are used for tiering. Together, this provides several hundred TB of storage capacity. Multiple ESX hosts and other Windows and Unix servers are now distributed between the data centres which are physically separated across a 'stretched cluster' configuration. While the other Windows and Unix servers are mainly used for MS SQL databases and file services, all the essential services provided through application systems commonly used in publishing have been virtualised. Implementation was completed in only five days, after which, work began on gradually migrating data from the old platform occurring in the background over the course of several weeks while day-to-day operations continued.

Customer advantages:

- **High availability**

DataCore SANsymphony V10 ensures Spiegel the highest level of availability through synchronous mirroring of data available across interconnected hardware to provide transparent auto failover and seamless resynchronisation (auto-failback) should a failure occur.

- **Multi-vendor support**

All storage services (thin provisioning, caching technology, auto-tiering, asynchronous replication, reporting, etc.) are available across the entire infrastructure regardless of manufacturer, model or technology (disk, SSD, cloud). The publishing house can perform customised, cost-effective upgrades as and when additional requirements arise in the future. Additions can be made on the fly, with no negative impact on business-critical applications.

> "The integration of flash cards directly into the DataCore nodes generates a significant increase in performance. The SanDisk cards meet our all requirements in terms of performance and stability. Together with DataCore's write caching and auto-tiering, this not only reduces latency periods, it also allows flash to be used more efficiently and cost-effectively. Overall, performance has improved five-fold."
>
> - Robert Kiehne, Group Head, IT System Management, SPIEGEL-Verlag

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> The DataCore platform gives us the opportunity of configuring our storage infrastructure flexibly, regardless of whether we expand our SAN in the future, set up a virtual SAN or migrate a data centre. We can respond to actual needs as required regardless of which manufacturer's products we're using.
>
> - Robert Kiehne, Group Head, IT System Management, SPIEGEL-Verlag

- **CDP (continuous data protection) and snapshots**

SPIEGEL uses integrated DataCore snapshots and the CDP (continuous data protection) option for backing up certain systems. This allows roll-back if required on any changes to selected systems within given windows and therefore provides SPIEGEL with continuous recovery. At SPIEGEL, snapshots provider 24-hour permanent backup of the file server and of important Windows clusters.

- **Significant performance boost provided via SSD integration and auto-tiering**

DataCore's auto-tiering feature also integrates the PCIe cards within the server and ensures that individual memory blocks are automatically moved to different classes in accordance with their performance requirements. This allows the publishing house to utilise existing SATA, SAS and SSD capacity to the fullest extent and provides greater cost-effectiveness based on usage.

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