

S U C C E S S S T O R Y

# Hitachi Storage Solutions at Work

## SDV (Sparda-Datenverarbeitung eG)

**INDUSTRY** Services: IT Service Provider for Large Banking Groups

**SOLUTIONS** Consolidation/Simplification

**Hardware**—Hitachi TagmaStore® Universal Storage Platform models USP600 and USP100

**Software**—Hitachi TrueCopy® Remote Replication software bundle, Hitachi Virtual Partition Manager software, Hitachi Resource Manager™ utility package and its Performance Monitor feature, and Hitachi Remote Copy Scripts



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*Bernd Bohne  
Department Manager of Databases and Central System Engineering  
Sparda-Datenverarbeitung eG*



# Sparda-Datenverarbeitung eG Consolidates the Sparda and PSD Group Storage Landscape with Hitachi Storage

Banks are currently under particular pressure from the competition. It is important, therefore, that IT optimally supports bank business processes. Long response times and obsolete systems are hindrances in this case. For this reason, Sparda-Datenverarbeitung eG in Nuremberg, the IT service provider of the Sparda and PSD banking group, decided to renovate and consolidate the group's existing storage architecture, based on the Hitachi TagmaStore® Universal Storage Platform.

For Sparda-Datenverarbeitung eG (SDV), which carries out data processing tasks for the Sparda and PSD banking group, was due for a restructuring of the group's storage infrastructure around 18 months ago. Previously, the company worked with a heterogeneous storage landscape that was not networked: The IBM® mainframe with IBM z/OS® and Linux for IBM z/Series® partitions, on which the most important business applications run, stored its data on a directly connected Hitachi Lightning 9980V™ multi-cabinet enterprise storage

system with 10TB of storage capacity. The same constellation was adhered to at a second computer center location.

## Partitioning Capability and Manufacturer Independence Influence Decision

"When it was time for the Lightning 9980V system to be renovated, we decided to not just use a more up-to-date product. We also wanted to consolidate several previously separate storage areas on one central platform," reports Bernd Bohne, department manager

of databases and central system engineering for SDV. "The prerequisite was that one of the technologies being offered would win us over with its performance capabilities and dependability. Otherwise, we would have stayed with a non-centralized solution. The partitioning capability played a particular role in this, because the data should be kept separate even when they are running on one machine, depending on the need, both logically and physically," he explains. In addition, he valued the price-to-performance ratio and a certain manufacturer independence.

The decision was ultimately made in favor of the Hitachi TagmaStore® Universal Storage Platform family as the successor solution. "This platform can be divided into up to 32 virtual or logically independent systems," Bohne justifies his decision. And, he adds, "In comparison to the competition, Hitachi storage could be upgraded with a much more flexible partitioning feature and more comprehensive capabilities for microcode upgrades. The Universal Storage Platforms from Hitachi Data Systems had reached a very high degree of maturity at that point in time, which was confirmed to us by other installations." Furthermore, SDV had good experiences in the past with Hitachi Data Systems as a partner at the manufacturing end.

In June 2005, the implementation of the new system began. The desired data was migrated step-by-step to two new Universal Storage Platforms. The primary system is a model USP600 with 48TB of storage capacity, consisting of 146GB Fibre Channel drives and is located in the central computer center. The redundant system is a model USP100 with 26TB of storage capacity, which was implemented in the alternative computer center. Here too, 146GB Fibre Channel drives make up the storage medium.

## Migration without Interrupting Operations

During the relocation of the mainframe data from the Lightning 9980V system to the Universal Storage Platforms, the team proceeded as follows: First, the Remote Copy function and the corresponding Hitachi Remote Copy scripts were tested within one day in order to check their general functional capability. Then Heinz Schwarz, acting department manager for SDV's central

After the mirror had been running for a week without problems, the systems switched roles: The former primary Lightning 9980V system became the secondary system and the USP600 became the primary system. "Only during this procedure was the system unavailable for one and a half hours," stresses Bohne. Then the old Lightning 9980V system was disconnected and replaced by model USP100, which serves as the secondary storage unit to this day. Basically, there is no fixed distribution of roles of the primary and

The 400GB of data from the controlling application, which runs on one AIX system, was previously stored on a NAS filer. Now the controlling data is stored on one of the three logically separated AIX partitions of the USP600. Physically, the storage system is divided into two partitions: one for AIX and one for the mainframe with IBM z/VM® and z/OS.

The anticipated data growth of 20 to 30 percent per year depending on the application is seen by Bohne as having occurred without problems. Lastly, the new Hitachi TagmaStore Universal Storage Platforms, which are supposed to be used for a minimum of four years, provide sufficient expansion capabilities.



**There is no fixed distribution of roles of the primary and secondary Universal Storage Platform models. "Since the solution has been running, we have not had any problems."**

Bernd Bohne  
Department Manager of Databases and Central System Engineering  
Sparda-Datenverarbeitung eG

system engineering, set up and tested the data paths by copying empty drives. "In this way, we were able to find out whether all of the mirroring functions actually function," recalls Schwarz.

In order to have as little impact as possible on the daily work routine, the actual migration took place beginning on a weekend. First, the secondary Lightning 9980V system was disconnected and the connections were plugged into model USP600. Next, a mirror of the data was made there with the aid of Hitachi TrueCopy® Heterogeneous Remote Replication software bundle. This happened during production and operations were not interrupted.

secondary system. "Since the solution has been running, we have not had any problems," says Bohne with satisfaction.

Because the mirroring system functioned smoothly, Bohne decided in the late summer of 2005 to also migrate the data warehouse data on the IBM AIX®. This was 8TB at that time, which was relocated with the aid of software tools of the data warehouse supplier. "This migration took place over ten consecutive nights in order not to disrupt operations during the day," reports Schwarz. During the migration, the ten data warehouse nodes were copied over one after another, one node per night. The data is now also stored on the USP600.

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