



Basler Versicherungen puts contingency plan into action with DataCore™ software

***Move IT* – Data Protection and Replication Over 300 Miles**

The IT department of German insurance company Basler Versicherungen, based in Bad Homburg, was faced with the challenge of setting up an emergency computer center in Bremen. Based on DataCore's virtualization platform, SANsymphony™, Kramer & Crew Systems came up with a solution which is not only capable of replicating data over a distance of 300 miles, but also offers local data protection and reduces storage costs through hardware independence.



Basler is one of the top thirty insurance companies in Germany. The company was formed in 2003 following a merger of the Basler and Securitas companies. This established company has been active in the German market for over 140 years, offering insurance solutions for private, commercial and industrial customers covering a range of services, from indemnity and accident insurance through life assurance and retirement plans. Around 1,300 in-house staff and 400 field representatives throughout Germany provide individual customer advice and support.

The insurer's IT department faced a major challenge in the form of rapidly increasing data fuelled by the need to archive the e-mail and written communications that were being generated at exploding rates through the use of new applications such as a Document Management System (DMS). Over the last three years, the amount of data has doubled, although personnel numbers have remained unchanged. Due to the greater demands placed on the IT systems, IT engineers initially set up a SAN infrastructure with an HP EVA 3000 storage array and 3.5 terabyte capacity to guarantee high accessibility of the IT systems.

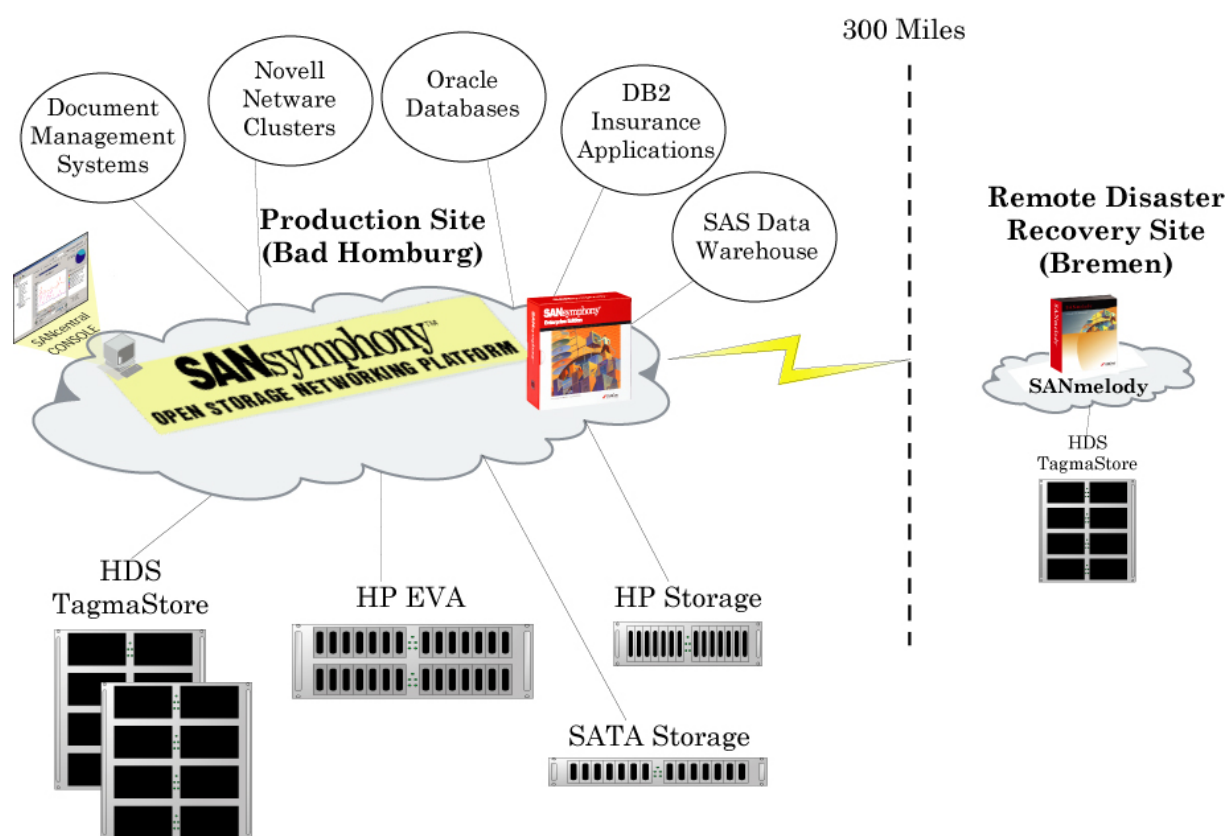
The need to develop a new data protection and contingency plan arose when the company set up an emergency back-up facility for business-critical applications in Bremen, where the infrastructure of the former Securitas computer center was available. The particular challenge was to achieve data mirroring via the available 1.5 Mbit ATM dedicated line over a distance of 300 miles, without having a negative effect on the operations of the production systems. In an analysis of the solutions offered by established hardware providers, an independent team discovered that, on the one hand, the company's existing replication tools could not meet these requirements and, on the other, purchasing a hardware solution was too expensive.

Confidence in new partners

Cologne-based IT company, Kramer & Crew, proposed a new and more flexible solution. The SAN in the Bad Homburg computer center was to be virtualized using DataCore SANsymphony, with an additional disk storage subsystem deployed redundantly and finally mirrored to Bremen using DataCore's AIM (Asynchronous IP mirroring) capability. After a six month selection, evaluation and testing process, Basler opted for this approach.

"The hardware independence of the DataCore solution and the option of setting up data mirroring and auto-recovery locally were convincing factors from the outset, although that wasn't the main focus of the project," commented Thomas Dörr, Head of Disaster Planning/Networks at Basler. "As the AIM tool from DataCore also proved to be as effective and competitive in comparison to other products on the market, the decision was straightforward,"

Basler Insurance



The first step involved the installation of two HP DL380 servers with dual 3.6 GHz processors, each with 3 GB RAM, three dual FC cards and 72 GB internal SCSI drive capacity integrated with RAID 1 configuration. These standard Intel-based servers would be the engines for storage services. Using SANsymphony Enterprise Edition, these were integrated into the SAN as the Storage Domain Servers (SDS) and set up as the central control point for all the storage disks in the SAN. Standard functions include centralized management, simple admin of virtual partitions and zones for the storage pool, the automatic allocation of storage capacity for the applications as well as the synchronous mirroring and auto-failover between mirrors of SDS-controlled virtual disk drives. Booting from the SAN also became possible via these DataCore servers. In addition, DataCore snapshots enabled

fast disk-to-disk backups locally and the AIM tool enabled asynchronous data mirroring to Bremen.

Three of the eleven members of the Basler IT team received a two day training course on the SANsymphony environment, a course organized and run by Kramer & Crew. This provided the personnel with enough technical knowledge to master the day-to-day running of the system by covering topics such as server connections to the SAN, allocation of disk capacity from the storage pool, and extension of the disk systems.

"Integrating SANsymphony into the SAN went without a hitch, as we made careful preparations in close liaison with the people responsible at Basler," said Servet Büyük, sales executive at Kramer & Crew. "The important thing is to carefully check that all components are supported and to fully document the installation. Then, SANsymphony is relatively easy to use."

Free choice of hardware

The SAN was expanded on the hardware side by the addition of a new storage array system from HDS, the TagmaStore AMS 200, which was set up via SANsymphony as a mirror for the currently installed storage systems. When the support contract on the old storage was cancelled, the decision was made to change it for a second HDS TagmaStore as well as to upgrade the two disk arrays to 4.5 terabytes each. A SATA array with a capacity of 2 terabytes was also integrated within the SANsymphony storage pool. This SATA array is now being used as the target device for the snapshots and for recovering any data loss.

"Regardless of the disk subsystem, the software offers intelligence for SAN management and high accessibility. This meant that we were able to upgrade to more reasonably priced storage with more capacity, reducing costs by about 50 per cent while maintaining full functionality," said Mr. Dörr.

The business-critical data and applications are now stored in a storage network with a capacity of 11 terabytes and growing. These include file services and office data under Novell Netware, a DB2-based insurance application, the in-house DataWare system, based on SAS, and a human resources system, based on an Oracle databank. Four FC Switches from Brocade with a total of 64 ports make all components redundant and provide crosswise connection. High availability is not only due to data mirroring, but path redundancy is created via the two SDSs. According to Mr. Dörr, "At the beginning we had minor disk failures with the new hardware. Once, a complete disk subsystem actually failed. DataCore's automatic failover function kicked in, which ensured that our applications were not affected by the failure."

Asynchronous mirroring to Bremen

After the first steps of expanding the SAN and making the business-critical applications highly accessible through the mirroring process had been completed, the implementation of distance mirroring was next on the agenda. To this end, the computer center in Bremen was equipped with a SANmelody™ disk server and another HDS TagmaStore with a 3.5 terabyte capacity. SANmelody, DataCore's "smaller" virtualization platform, is aimed at medium-sized enterprises, departments and remote site deployments.

The systems were first installed in Bad Homburg to carry out the initial mirroring of the complete data. The hardware was then finally brought to the computer center in Bremen, was connected to Bad Homburg via a WAN connection, and began operating by first transmitting any changes (Deltas).

DataCore's AIM capability (Asynchronous IP Mirroring) comes into play for the data replication between the two sites, which are over 300 miles apart. The tool is optimized for asynchronous data mirroring via LANs/MANs/WANs, and does not need any additional

hardware or proprietary network protocols. The product uses the internal server storage as an AIM buffer to enable data to be transferred without negatively affecting current operations, while providing the highest level of data protection. The user defines the syncpoints via a GUI. At these time points, the system independently checks the integrity and consistency of the data before it is released for transmission. Once the data has reached its target, a synchronous adjustment completes the process and empties the buffer.

At Basler, continuous mirroring is concentrated on the commercial and transaction-critical data (i.e. predominately on file servers with a capacity of 1.1 terabytes, as well as DB2 databanks). An internal capacity of 72 GB is available as a buffer of which 46 GB are used daily on the 1.5 Mbit connection. Increased speed is provided by the WAN accelerator (supplied by Juniper); a transmission time of approximately four hours is sufficient.

Emergency computer center on demand

Bremer now has a complete server environment with the necessary applications available on-demand in case of emergencies. If the computer center in Bad Homburg fails or is destroyed, the machines in Bremen will immediately be booted up via the SANmelody system to which the current application data from the Bad Homburg site was mirrored.. According to Mr. Dörr, he believes that Bremen will now be able to compensate for such a situation within a few hours and continue business processes.

Basler is currently seeking to further expand its virtual infrastructure. Two VMware ESX 3.0 servers have been migrated into the SAN. The server virtualization, in combination with the storage virtualization, is initially being used to support the high-availability of the DMS system. For the future, an extensive virtual infrastructure is planned, using a combination of server and storage virtualization.

Sums up Mr. Dörr, "We are very pleased with the outcome. After all, we have not only managed to put in place an effective replication solution that meets requirements, but we are also benefiting from high-availability, higher performance in our current business and a hardware independence, which will reduce costs in the long term. Kramer & Crew and DataCore have provided us with outstanding support in terms of planning, implementation and accompanying documentation."

Overview

The company

Basler Versicherungen based in Bad Homburg is a subsidiary of the Swiss Bâloise Group and a top insurance provider in Germany. Basler has 1,300 employees plus approximately 400 of its own sales partners. The company's consolidated premiums volume in the 2005 financial year amounted to approximately EURO 680 million.

Main requirement

Remote data mirroring in an emergency computer center

Advantages

Disaster control, high availability, hardware independence, cost reduction

Hardware

3x HDS TagmaStore AMS200 - two at 4.5 terabytes and one 3.5 terabytes
3x HP DL380, 3.6 GHz dual processor, 3 GB RAM 72 GB SCSI disks in RAID1 configuration

DataCore solution

SANsymphony Enterprise Edition
SANmelody Disk Server Software
DataCore Snapshot Option
DataCore Asynchronous IP Mirroring (AIM)

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