The implementation of VTL is a textbook example of how to achieve success as part of a team.

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Accident Insurer Suva and Hitachi Employ Impeccable Teamwork to Implement Successful Virtual Tape Library

Some 118,000 Swiss companies and 1.9 million professionals are insured by Suva, which has been operating independently under public law since 1918. The company’s mission is to cover the Swiss working population against the consequences of accidents and occupational illnesses. The result is an ever-increasing volume of data that must be backed up accordingly. As the previous storage solution had reached its capacity limit, a new, sustainable solution had to be found. Thanks to a virtual tape library (VTL) comprising Hitachi Unified Storage 150 and FalconStor VTL software, Suva can now look forward to a more secure future for its data.

About Suva
Suva (www.suva.ch) employs some 3000 staff at its headquarters in Lucerne, Switzerland, its 18 agencies throughout Switzerland and the 2 rehabilitation clinics at Bellikon and Sion. The unemployed are automatically insured by Suva. In addition, it has provided insurance cover for the military since 2005 on behalf of the Federal Government.

The services provided by Suva include prevention, insurance, rehabilitation and reintegration into the work process. Suva is self-supporting, with no public funding, and returns profits to the insured in the form of lower premiums. Suva generates a premium volume of around 4.24 billion Swiss francs.

For today’s companies, especially insurance companies that maintain data inventories of highly confidential client information, data is a valuable asset that must be managed and protected. As the largest mandatory accident insurance institution in Switzerland, Suva has a particular responsibility in this respect. All data that accumulates during work processes and that is used on an ongoing basis must be backed up accordingly. The scope of this data is considerable, as Heinrich Zwimpfer, systems specialist and team leader at Suva, is all too aware. “We are talking about a petabyte of data that has to be protected accordingly,” he explains.

Benefits at a Glance

- Significantly improved backup and restore times.
- Optimal flexibility in lifecycle planning.
- Maximized data backup.
- Top service standards.
When it comes to protecting data, expertise and reliability are vital. They are 2 characteristics that Suva values highly in its storage partner, Hitachi Data Systems. “This partnership has proven its value over a period of 15 years now, both with regard to the products offered, and the service and support provided,” says Zwimpfer. And this collaboration is still ongoing. The storage specialist is also involved in the latest accident insurance project, which relates to the new backup system.

**The Challenges: Increasing Data Volumes, Inferior Performance**

Previously, the first data backup step was performed at the Suva premises on a Hitachi Virtual Storage Platform (VSP). The data was then migrated to the tapes in the 2 physical tape libraries. It was at this stage that the first problem became apparent: Until the data was transferred to the tape, both the live data and the backup data were stored on the same medium: the VSP. In addition, the physical tape libraries (2 libraries of 500 tapes and 12 drives) had reached their capacity limit. Their lifecycle was at an end.

As you would expect, the backup and restore times became ever longer and reached a stage where they were no longer tolerable. Performance is the most important factor in a modern backup system. As such, an optimal level of performance had to be achieved again as quickly as possible.

The IT specialists set about searching for the best possible system. Their research revealed that a virtual tape library was needed, and the proof-of-concept phase was launched. The first step was to formulate the requirements for the new backup system based on the current data volumes and their anticipated medium-term development.

These findings indicated a range of possible solutions. The suppliers were then invited to present their solutions and submit bids, a complex process that the Suva project managers approached with the utmost care.

**The Solution: Hardware by Hitachi and Software by FalconStor**

Hitachi Data Systems entered the competition with its technology partner FalconStor, a hard disk-based data protection specialist. The solution, which is tailored to Suva’s requirements, comprises 2 redundant Hitachi Unified Storage (HUS) 150 storage systems in combination with the FalconStor VTL hardware and software. It was an impressive bid that saw Hitachi and FalconStor come out top.

There are always many factors that influence the decision to opt for a particular system and/or supplier. Zwimpfer is quick to mention the points that ultimately tipped the balance in favor of HDS: “For us, the Hitachi price-performance ratio was simply the best on offer. Furthermore, our existing partnership with the company had proven itself over many years,” he explained. The ability of Hitachi Data Systems to supply both the hardware and the software from a single source, thanks to its collaboration with FalconStor, was also an important factor for Suva.

The evaluation phase of the project was successfully completed in 2012, meaning that the design phase could be launched in January 2013. The entire project was brought to a successful conclusion in June of this year.

**The Benefits**

**Performance Guaranteed Once More**

The fact that the backup infrastructure had to be expanded to include the new components during operation presented a particular challenge. Suva did not want its users to notice the process or have to make any adjustments. Suva had to transfer all of the data before it could be deleted on the old components. The migrations could not take place at night, as they would have conflicted with the scheduled backups. The newly implemented solution enables migration from IBM® Tivoli Storage Manager® (TSM) disk pools to data backup via virtual tape libraries (VTL). The backup software receives the data and transfers it to the VTL, which comprises the FalconStor software, server systems and the HUS 150 storage systems. In addition, the data is then duplicated on a physical tape library and/or physical tapes, thereby enabling a significantly better throughput for the backup and restore operations.

Moreover, greater flexibility has been achieved in the allocation of resources for data backup. This improvement results from considerably faster hardware and to the benefits offered by the LAN-free backup that is used on selected systems with large volumes of data. While the physical solution only allowed 1 channel to be operated, the company now carries out backup to the VTL on multiple channels.

“In plain language, this means a reduction in the data warehouse backup run times from 30 hours to just 1.5 hours,” reports Heinrich Zwimpfer, Systems Specialist, IFS-ZS Team Leader, Suva.

Suva needs a partner that can cater to all of its requirements. Hitachi Data Systems was able to provide us with a complete solution from a single source.
Suva Innovates With Information

Suva insures around 118,000 Swiss companies and 1.9 million employees against the consequences of accidents and occupational diseases. Thus, the related amount of data is enormous. And its security and availability is essential. The Hitachi and FalconsStor solution ensured that Suva’s data would be more quickly available for innovation. The periods for data warehouse backup were reduced from 30 hours to 1 1/2 hours. In addition, the perfect teamwork of Hitachi and FalconStor delivered not only successful project management, design and implementation, but also a comprehensive operations manual. With these elements in place, ensuring data security and availability, Suva can focus on innovating with information, improving its insurance services for customers across the country.

Zwimpfer. Thanks to the meticulous planning of the implementation phase, most internal customers remained completely unaware of the migration. However, they have noticed how quickly individual files can be retrieved with the new solution. A process that used to take several minutes can now be completed by the new solution within a few seconds. “Some people did ask us why it was so quick, all of a sudden,” recalls Zwimpfer.

A Successful Outcome With a Strong Team

The implementation of the new backup system meant that a large amount of capacity was freed up on the existing Hitachi Virtual Storage Platform; this platform was no longer needed for intermediate storage. In turn, this gave the IT managers at Suva the opportunity to use VSP as a storage medium for all work data. This new storage meant that further expansion in this area was not necessary, which was an advantage in terms of investment protection. The disproportionately greater flexibility that Suva has now gained in relation to lifecycles is an extra benefit: “The components can be replaced independently of one another. This minimizes the risk for us,” says Zwimpfer.

The clearly defined allocation of tasks was a key success factor for the project. Everyone on the team knew what they had to do. The specialists from Hitachi Data Systems and FalconStor were responsible for the project management, design, installation and basic configuration of the VTL appliance. Ultimately, they drew up a comprehensive operating manual. The Suva team made use of its skills in customizing the system, as this was the aspect of the project that required internal company expertise. The company’s expertise was needed in particular for the configuration of the VTL in accordance with Suva’s legal requirements, as well as for the migration of the backup clients.

In particular, Zwimpfer and his colleagues appreciated the fact that they could approach Hitachi Data Systems for further assistance at any time. “We were able to openly discuss any challenges that cropped up, safe in the knowledge that they would be addressed swiftly,” he explains.

Even in the operating phase, Hitachi Data Systems is still the primary contact for Suva for any VTL issues. Hitachi Data Systems specialists handle system monitoring, as well as hardware and software maintenance of the VTL appliances. FalconStor also acts as a competent partner in the background. “The implementation of VTL is a textbook example of how to achieve success as part of a team,” emphasizes Zwimpfer.