

Case Study

Krones AG

» By using the ETERNUS CS data protection appliances, we have increased the security of our backup strategy. We now replicate the data from our offices at our headquarters and benefit from the high performance of the appliances «

Gerd Neuland, Head of Data Center, Krones AG



THE CUSTOMER

Country: Germany / worldwide
 Industry sector: Engineering
 Founded: 1951
 Employees: 11,400
 Website: www.krones.com



CHALLENGE

As part of the renovation of its entire backup strategy, Krones AG was looking for a solution to replicate the data from its offices quickly and easily at the headquarters. It also wanted to be able to restore from there if necessary.

APPROACH

By using Fujitsu's ETERNUS High End and ETERNUS CS800 systems, Krones now has access to high performance, reliable appliances for company-wide backups.

The customer

Every day, millions of bottles, cans and special-shaped containers are handled on Krones lines. This is mainly for breweries, the soft-drinks sector and for producers of wines and spirits, but also for the food and luxury-goods industries and the chemical, cosmetics and pharmaceutical industries. Since its foundation in 1951, Krones has become far more than a traditional machinery and line manufacturer. It has evolved into an all-round partner to its clients. Krones has seamlessly integrated and optimized the fields of mechanical engineering, line expertise, process engineering, microbiology and information technology. More than 2,200 full and utility patents bear witness to the company's innovative potential. In 2011, the company's sales totalled €2.480 billion.

The challenge

As well as the headquarters in Neutraubling, Bavaria, the company has three manufacturing centers in Germany where up to 90% of exports are produced. The company had been using local tape storage for its backups. The data was not being mirrored at the headquarters. "We didn't want to have tapes in the factories any longer," explains Gerd Neuland, Head of Data Center for Krones AG. "We decided to look more closely at the ETERNUS CS appliances as we had had good experiences with our current servers and the corresponding support from Fujitsu."

The solution

Krones began by replacing the tape backup systems at the factories in Flensburg, Rosenheim and Freising. The company now have an ETERNUS CS800 deduplication system with a 16 terabyte hard drive. The counterpart to replicate the data at the Krones headquarters is also an ETERNUS CS800, this one with a 64 terabyte hard drive. To secure all the data from the company headquarters, Krones decided on a High End version ETERNUS CS2000, a unified data protection system with a 180 terabyte internal hard drive. Unlike at the factories, it did not want to lose the obvious advantages of tape storage at the headquarters. This was possible as the ETERNUS CS High End has a virtualization layer between the backup software and the tape library, and takes over management of the tape system.

THE BENEFIT

- High data availability due to fast backup and recovery times
- Drastic reduction in backup data volumes through deduplication
- Easily scalable
- Simple restoration of virtual machines, applications and data
- Disaster-recovery planning through replication of branch data at the headquarters
- Central access to all backup data

PRODUCTS AND SERVICES

Backup systems at the headquarters:

- 1 x Fujitsu ETERNUS CS2000, 1 x Fujitsu ETERNUS CS800 powered by Intel® Xeon® processor

Backup systems in the offices:

- 3 x Fujitsu ETERNUS CS800
- Backup software: Symantec NetBackup
- Services: Fujitsu maintenance for all of the backup hardware and software infrastructure, including Symantec

The benefit

The first to notice the benefits of the new systems were the employees in the IT departments at Kronos' factories. *"We have saved around 50% on our administration costs here,"* says Gerd Neuland. *"In the old environment with physical tapes, the weekly expenditure was three hours per factory. As tape storage, exchange, labelling and rewinding are no longer needed, the expenditure reduces to one and a half hours."* You can also add to this the faster recovery of data, as this is much faster with a backup to disk solution, and releases the central IT department in Neutraubling. *"The factories can now independently recover data via the ETERNUS CS800 if anything goes missing,"* says Neuland.

The Kronos factories produce an average of 10 terabytes of data per day that requires storage. Depending on how much the data changes, the deduplication rate differs by a factor of 10:1 in the factories and 30:1 in the headquarters in Neutraubling. The 16 terabytes available on the ETERNUS CS800 system are therefore more than sufficient. To keep the administration time as low as possible and provide smooth replication on the ETERNUS CS800 in the headquarters, all of the systems are configured in the same way. This is already implemented on the ETERNUS CS800 system and no software licenses are required for the replication. *"This increases our data security enormously,"* says Neuland. *"If a server room goes down in one of the factories, we can restore a new system with the ETERNUS CS800."*

An important benefit for Kronos was that the ETERNUS CS systems are easily scaled. The data volume in the factories increases by around 30% per year. In the headquarters, it doubles every year. There is a constant flow of new data from the construction of drink filling and packaging lines as well as reports and photos from the field as Kronos oversees worldwide installations on site.

Due to this high amount of data coming into the headquarters, the ETERNUS CS High End is clearly a more efficient data protection system for Kronos. It receives SAP and Oracle data as well as the virtual machines for both mirrored data centers, meaning that 33 terabytes come in on weekdays and 45 terabytes at weekends. As some data has to be stored for three to six months, this increases the backup data volume to 1.5 petabytes.

To store this data in the most cost-effective and secure way, the back end of the ETERNUS CS High End is connected to a quantum tape library. As the data management is automated between the drives and tapes by the ETERNUS CS High End, this has given Gerd Neuland's team a very flexible all-round solution: *"At peak times, 100 backups are running in parallel on the ETERNUS CS High End at the headquarters, with 64 virtual drives available for the backup software. Ten physical drives are also needed for the quantum library in the back end of the ETERNUS CS High End,"* continues Gerd Neuland. *"This would not be possible with a conventional system."* And as the Fujitsu system has two large cache modules of 5.4 terabytes, which save the data initially, the drives do not have to use the uneconomical start-stop process and even get a break every now and again. A big advantage for Kronos is that the ETERNUS CS High End automatically gets the best speeds and cost efficiencies out of the drive and tape technologies

Conclusion

In the next step, Kronos plans to connect the two backup cycles which currently run in parallel. This would mean that the factories' data would not only be replicated on the ETERNUS CS800 at the headquarters, but also on its 'big brother', the ETERNUS CS High End. *"For us, it is a great advantage that Fujitsu provide all our support for the entire backup infrastructure from hardware to maintenance, even including the Symantec software,"* summarizes Neuland, who is already planning on further extending the backup strategy with Fujitsu:

"We are planning to roll out the ETERNUS CS800 systems to our international offices, which are relatively small and do not have their own IT personnel. This would allow us to ensure data security without needing someone with IT knowledge to change the tapes."

About Fujitsu

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 2014-05-22

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