Hitachi Supports German Thriftiness, Helps to Reduce Costs and Enhance Performance at Tübingen University Hospital

Tübingen University Hospital (UKT) relies on Hitachi NAS Platform (HNAS) from Hitachi Data Systems: The thrifty nature of Germans from the southwestern region of Swabia is something of a cliché. However, like all hospitals, UKT has to live up to this cliché when it comes to costs. In terms of performance, the establishment is witnessing a period of growth, which means that the internal IT department is growing, too. Advances in quality of care and medical technology are resulting in rapidly increasing volumes of data. Tübingen University Hospital has opted for network-attached storage (NAS) from Hitachi Data Systems (HDS) to help it manage these volumes in a cost-effective manner.

The Challenge: Support Unstructured Data and Centralize

Consolidation and centralization often represent the proverbial silver bullet in IT as they promise, among other things, lower costs and optimized administration. With this in mind, the Board of Tübingen University Hospital took the decision in 2011 to bring together the hospital’s disparate IT systems to form a common environment. However, this type of infrastructure requires systems that are powerful enough to cope with being accessed by a large number of users, both in terms of performance and capacity. Legacy systems, which frequently hail from a bygone era of IT, are often not sufficient for this purpose, both when it comes to the immediate migration and over the long term.

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Tübingen University Hospital (UKT)

INDUSTRY
Healthcare

SOLUTION
File and Content, Unified Storage, Business Continuity

HARDWARE
Hitachi NAS Platform (HNAS) 3080
Hitachi Unified Storage HUS 130

SOFTWARE
Hitachi TrueCopy

SERVICES
Provided by Hitachi Partner Cristie

Benefits at a Glance
- Lower costs.
- Greater capacity.
- Futureproof design.
- Audit compliance.
the storage systems, had precisely this experience: “We had set ourselves the goal of standardizing our infrastructure. In terms of storage, this would place increased requirements on the applications as a result of a higher number of accesses, and would also require increased capacity. For cost reasons, we could only consider a NAS system to meet our needs. Unfortunately, our existing storage system was unable to cope with the new requirements, especially when it came to unstructured data. This was compounded by the fact that it was no longer cost-effective to maintain.”

Rising maintenance costs for an out-of-date system, coupled with a dramatic increase in unstructured data volumes, were an unwelcome problem at UKT. One of the most prestigious university hospitals in Germany, UKT ranks among the leading institutions in the world in several areas. More than 9000 employees across 17 clinics and 12 interdisciplinary centers need reliable access to the hospital’s IT system. Without such access, not only would the administrative side of things come to a standstill, but the medical teams and the affiliated research departments at the University of Tübingen would suffer as well.

The Solution: Powerful NAS Systems

For these reasons, the infrastructure department decided in mid-2011 to replace the NAS systems. The criteria for the new storage system covered 3 key areas: costs, performance and a futureproof design. With these requirements in mind, the team started to look for potential alternatives in early 2012. Once possible implementation options and solutions had been identified during the spring and early summer of 2012, the University Hospital put up the storage systems for public tender in July 2012 with a view to putting as little strain on the public purse as possible.

It didn’t take long to reach a decision. After evaluating all the bids, the hospital decided in September 2012 in favor of storage specialist Hitachi Data Systems and partner Cristie. UKT appreciated their offer of a combined solution consisting of 2 Hitachi NAS Platform 3080 systems and 2 Hitachi Unified Storage (HUS) 130 systems. Together with the associated services and software, they formed a convincing package. The systems were delivered and installed a short time later, in October and November.

The arrival of the new NAS storage infrastructure has provided Tübingen University Hospital with almost 400TB of additional raw storage capacity. The solution uses 120 SAS disks per system, each with a capacity of 2TB.

The hospital mirrors the data using Hitachi TrueCopy replication software. The SyncDR cluster was designed to guarantee the availability of the entire IT environment in the event of a disaster, with only minimal disruption of business-critical applications and without the loss of a single transaction. Under this solution, the HNAS systems provide the file services, while the 2 HUS systems store all the data and replicate it synchronously to the other system via TrueCopy. The storage systems are linked both to each other and to the 2 NAS heads.

The final work, along with staff training, took place at the end of 2012 and start of 2013. Sick was delighted that the project had run so smoothly and called it “a superb result, which is down to both the quality of the solution and, first and foremost, the excellent cooperation with HDS.”

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Benefits: Lower Costs, Greater Capacity and a Futureproof Design

The archived data has already been migrated to the new storage systems, with the email and other office data set to follow shortly. The increased use of NAS for this unstructured data has enabled Sick and his team to achieve their goal of significantly lowering storage costs: “Our costs under the HNAS system are around a third lower than with SAN storage,” explains Sick. “However, the fact that we now have a futureproof system is at least as important. We aim to offer a high level of service, and this includes responding to all incoming requests rapidly. The HNAS 3080 enables us to achieve this goal in a reliable manner.”

A further advantage of the implemented solution is the ability to offer various service levels. The multitenancy of the systems enables critical and business-critical service level agreements (SLAs) to be drawn up. The IT department can quite rightly describe itself as a service provider for the UKT: it is not for nothing that the team observes the standards of the IT Infrastructure Library (ITIL). In addition, the multitenancy capability has allowed the Tübingen team to set up a private cloud environment. Sick and his colleagues have established a secure storage service that is available throughout the hospital, supporting the various departments and the affiliated university centers in their interdisciplinary cooperation.

Anticipating that there will be around 750TB of capacity by 2020, Sick believes that the UKT will be able to integrate directly into the existing system without any additional license costs. The design can accommodate up to 4PB. What’s more, the futureproof design is not limited to performance and capacity. The entire system is already designed to enable data to be stored in an audit-compliant manner for the prescribed period of 30 years into the future. By then, the IT department will also have procured a new data processing center; the installation date is planned for 2014, much to the delight of Sick. He reports, “I am a satisfied IT employee. The new data processing center will be a modern facility for many years to come, as will the storage infrastructure. The strategic cooperation with our outstanding partners is paying off.”