HEIDENHEIM HOSPITAL

CENTRALISED SOLUTION AS THE „HEART OF IT"

HEIDENHEIM HOSPITAL MODERNISES STORAGE INFRASTRUCTURE IN JUST SIX WEEKS

"Thanks to TechniData's support and the solutions from Fujitsu and iTernity, we now have a cost-effective, scalable solution for legally compliant long-term data storage. The ease of expansion through non-proprietary storage allows us to respond quickly to new medical requirements."

Tobias Knolmar,
Head of IT, Kliniken Landkreis Heidenheim gGmbH

Photo (Canva): Heidenheim an der Brenz is located in eastern Baden-Württemberg, bordering Bavaria.

Sector:

Healthcare

Initial situation:

The storage infrastructure at Heidenheim Hospital was no longer up to date and could no longer guarantee adequate protection against failure.

The challenges:

- Replacing and updating the entire storage infrastructure
- Staff training
- Management of the storage infrastructure
- Switch to a sustainable solution for the long-term archiving of patient and research data in an audit-compliant manner

Solution:

Two FUJITSU ETERNUS DX 200 S4 Storage-systems
Four Brocade SAN Switches 6500
iTernity iCAS Archive-Middleware
System set-up by TechniData

SUCCESS AT A GLANCE

✓ Secure, mirrored solution, embedded in the operating concept

✓ Future expansion flexibility/scalability

✓ Data integrity and security for patient and research data

✓ Increased overall performance and uninterrupted operation in the event of hardware failure

✓ Low maintenance and reduced space, cooling and energy requirements

✓ Centralised solution as the „heart of IT": all of the hospital's IT systems draw storage capacity from the new solution

REPLACEMENT OF OUTDATED STORAGE INFRASTRUCTURE

Heidenheim Hospital is one of the largest hospitals in Baden-Württemberg. Located on Heidenheim's Schlossberg, the hospital treats nearly 60,000 inpatients, day patients and outpatients each year.

Around 1,800 employees ensure the high standard of medical and nursing care around the clock, 365 days a year. IT plays a central role in the digitalisation of the hospital. Medical devices and administrative IT systems for more efficient patient treatment processes mean that the volume of data is constantly growing. The existing storage infrastructure was outdated and could no longer cope with the increased demands. Heidenheim Hospital therefore decided to refresh its storage.

Key figures: Heidenheim Hospital

- 15 specialist clinics, two institutes
- approx. 60,000 patients per year
- approx. 1,800 employees

CHALLENGES AND OBJECTIVES

The IT infrastructure at Heidenheim Hospital was based on VNX5000 systems from DELL/EMC and Brocade 300 SAN switches, which were no longer up to date and could not guarantee sufficient failure protection. In addition, the existing infrastructure and the EMC Centera System Appliance previously used as an archive solution could no longer keep pace with the constantly increasing data volumes. The hospital's IT department saw an urgent need for action and decided to replace EMC Centera with a scalable and virtualisable storage solution. The customer therefore issued an RFP to find an IT partner for a storage refresh.

Objective: To provide a storage infrastructure that is critical to clinical operations, enabling high availability and flexibility while increasing performance.

THE PROJECT

TechniData IT-Service won the contract for the storage refresh as part of a Europe-wide tender and was entrusted with the evaluation, design and implementation of a storage solution. The solution package, consisting of two FUJITSU ETERNUS DX200 S4 storage systems with storage cluster functionality and four Brocade SAN Switches 6500, ensures the high availability of IT processes in the storage area. The iTernity iCAS middleware for long-term archiving ensures data integrity as well as data and audit safety.

TechniData IT-Service, a Fujitsu Select Expert Partner, impressed the hospital with its experience and expertise in the storage sector, as well as its broad IT skills and ability to think ,outside the box'. Implementing the new storage solution was no easy task, as the hospital's 24/7 operation meant that there were no maintenance windows for downtime. Another particular challenge was the timeframe of just one month from delivery of the hardware for implementation and migration. Around 150 systems in the

form of virtual and physical application servers with a total capacity of 90 terabytes had to be moved.

The implementation phase began with the replacement of the existing FC fabrics and optimisation of the SAN configuration. This was followed by the parallel installation of the new storage systems and the migration of the first workloads to test stability and functionality. The parallel setup offered the advantage that the new environment could be installed, configured and tested without time pressure. Pre-defined fault scenarios, load tests and performance analysis were carried out during this phase to prove the performance of the storage system. This also allowed for easy fallback to the old systems. During the implementation, the hospital's staff were trained on the job on site.

Once the systems had been handed over and the workload migrated, a two-week hypercare phase followed, during which storage experts from TechniData IT Service were available to the customer around the clock to identify and resolve any problems in the productive environment.

However, due to the careful preparatory work, this did not need to be accessed. After the hypercare phase, the old systems were dismantled and the project was completed.

IMPLEMENTATION IN JUST SIX WEEKS

The implementation was carried out in close coordination and efficient, trusting cooperation over a period of just six weeks, during which the infrastructure was delivered, set up and configured. Thanks to TechniData IT-Service, Heidenheim Hospital now has a modern storage infrastructure with sufficient space and the necessary flexibility for future expansion.

Essential services have been accelerated and associated processes shortened, giving the IT department more room to manoeuvre for existing and new systems. Reliability was simplified and increased through the use of new technologies, and IT operations were generally stabilised and future-proofed.

IT Manager Tobias Knolmar was very pleased with the implementation:

> *„It was important for us to find an IT partner who could provide a storage infrastructure optimised for clinical operations and implement it in a very short timeframe of just six weeks.“*

RETROSPECTIVE

The IT management at Heidenheim Hospital is still very happy with the decision it made in 2019 to use Fujitsu hardware, the iTernity iCAS software solution and the services provided by TechniData. By consolidating several systems, the hospital's IT department was able to significantly reduce the complexity of its IT infrastructure. The systems are still running smoothly today.

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says a delighted Mr Knolmar.

Replacing the EMC Centera archiving solution with iTernity's much more flexible iCAS as the central archiving backend for a wide range of data types has fully met expectations. Compared to the previous proprietary system, there was no need for training, which led to significant savings, especially in terms of personnel.

With hardware independence and validation for more than 150 applications, iCAS middleware fits seamlessly between business applications and the new storage infrastructure. WORM data storage and encryption ensure tamper protection and compliance. Mr Knolmar's biggest successes in this area are the significant increase in performance, the simple backup solution and the simplified troubleshooting.

In addition to the ever-present skills shortage, the IT manager sees the rapid growth of data in the healthcare sector as the biggest challenge for the future, with scalability playing a key role.

At Heidenheim Hospital, the IT department (12 employees) is faced with an annual data growth of 28%, due in particular to the rapid development of medical imaging equipment and the associated high volume of data. In 2019, the data volume at Heidenheim Hospital will be around 30 TB. The data volume quickly more than doubled (70 TB), mainly due to the consolidation of several systems. However, the new storage infrastructure and its scalability meant that this could be easily accommodated.

"Of all the solutions on offer, iCAS convinced us most in terms of the technical quality and cost-effectiveness of the solution. Above all, the hardware independence and the resulting easy expandability were decisive points for us in order to position ourselves for the future."

says the IT manager about iTernity's iCAS archiving solution.

A GLIMPSE INTO THE FUTURE

Tobias Knolmar, Head of IT at Heidenheim Hospital, expects data growth to continue to accelerate in the coming years. This is partly due to the 100 or so additional medical devices that will need to be networked by the beginning of 2024, and partly due to the digital patient file, which will need to be permanently available from the end of 2024 (with retention periods of up to 30 years in some cases).

Although the current storage infrastructure is not at capacity, the hardware warranties are coming to an end and the central storage area is due for replacement.

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