

Robert-Bosch-Krankenhaus

Robert-Bosch-Krankenhaus selects high-performance data storage technologies for a modern hospital.

Overview

Opened in 1940, Robert-Bosch-Krankenhaus (RBK) is one of the few foundation-founded private hospitals in Germany. RBK is operated by the Robert Bosch Foundation. A maximum-care hospital, RBK, "Klinik Charlottenhaus", has over 1,000 beds. More than 43,000 patients from the greater Stuttgart area are admitted each year. Patients are provided individual care by 2,700 staff.

Challenge

RBK is renowned in the Stuttgart region and beyond for the high quality of its services. Steady growth reflects the increasing popularity of this foundation-funded hospital, where medical staff devote their time to the patient. Double-digit growth in data volume is managed expertly by the IT department at RBK by means of advanced data storage and backup solutions. The light-filled buildings of the RBK generate a friendly and welcoming atmosphere. The interior design of these spacious structures reflects an awareness: Recuperation can be facilitated through an ambience that includes natural light, wood, and carefully chosen works of art. Pleasant surroundings appeal to the senses, making patients as well as hospital staff feel welcome and comfortable.

Advances in healthcare support RBK in treating complex diseases with precise and effective

therapies. RBK provides the very highest level of care—particularly to older patients who often suffer from multiple ailments. Currently, RBK is in the process of creating more space to improve the quality of patient accommodations. Within the scope of its ongoing STEP 2020 construction project, RBK intends to deliver on its vision of meeting patients' growing expectations both in the near future and over the long term.

In RBK's objectives, the concept of service plays a central role. The hospital's extensive and diverse service offerings as well as its consistently high level of medical and follow-up care are appreciated by patients. "We are a soundly financed, foundation-run hospital with a mission to provide maximum care. People are at the center of our mandate to society," says Walid Sbaih. "Everything we do is well thought out for the mid-term and the long term."

The IT department at RBK employs 30 staff. The team, led by Walid Sbaih, provides a full range of IT services to RBK and its affiliated clinics, "Klinik Schillerhöhe" and "Klinik Charlottenhaus". It also provides comprehensive hosting services to "Furtbachkrankenhaus." The IT department is committed to consistently delivering quality services: The majority of its staff are certified in the IT Infrastructure Library (ITIL) set of practices.



Robert-Bosch-Krankenhaus

At a Glance

- **Industry**
Healthcare
- **Location**
Stuttgart, Germany
- **Challenge**
Deliver greater automation, flexibility and scalability for data storage, backup and restore processes.
- **Products and Services**
Data Protector
- **Success Highlights**
 - + Provided greater protection through mirroring of data storage systems and accelerated backup and restore processes.
 - + Introduced a quantum leap in storage performance.
 - + Improved manageability of the storage.
 - + Data storage and archiving processes fulfill all regulatory requirements for hospitals.

Case Study

Robert-Bosch-Krankenhaus

The critical applications used at RBK include state-of-the-art picture archiving and communication systems (PACS), hospital information systems (HIS), and numerous subsystems tailored to the needs of individual hospital departments. In use as well are databases such as Oracle and Microsoft SQL Server, Microsoft Exchange Server as groupware and e-mail software, and VMware for virtualization.

The storage system in use for years at RBK had to be scheduled for regular maintenance work and updates to install the latest software versions. It was also necessary to migrate the stored data to the latest generation of linear tape-open (LTO) magnetic tape data storage. The growing requirements in the backup and restore arenas had to be incorporated into the overall IT strategy.

Solution

In an in-depth market analysis, Micro Focus emerged as the leading contender, with Micro Focus Data Protector as the data management software. "Technologically, [Micro Focus] had the better solution, and [Micro Focus] offered an attractive price-performance ratio," says Walid Sbaih.

With the hands-on involvement of Partner Bükotec, a proof of concept (PoC) for backup and restore solution was performed on site at RBK. All backup options were thoroughly tested and used to set up templates for subsequent migration. The PoC pilot installation was designed from the very start to be gradually expanded into a solution for productive use. "That saved us a lot of time, because we didn't have to set up the storage environment a second time following the PoC," reflects Walid Sbaih.

Thanks to sound planning and thorough preparation, the new backup and restore solution at RBK went live only six months after the PoC. "IT projects do not always come off with so little

stress. The human factor was key. Bükotec is not only our hardware supplier; they also provide excellent services that fit our needs," says Walid Sbaih. "Our technical contact did his job very well. The project received the right level of attention from management. The manager responsible for our project guided the work to rapid and successful completion with strategic skill and personal commitment. The pleasant, constructive and friendly collaboration had a decidedly positive influence on the entire project."

Results

Currently, each of the two mirrored storage systems contains about 220 TB of data from the hospital's production systems. Not only must this data be archived for 30 years; it must be auditable. Prompt data recovery is a key requirement.

The IT team at RBK can configure the 3PAR data storage system with the desired combination of solid-state (SSD) and SATA media without having to perform technical alterations. SSDs are used where high application performance is critical. For example, the Oracle databases were transferred from classical hard discs to SSDs. Radiology images that previously took twenty seconds to appear are now displayed in two seconds. "SSDs have ten times higher performance. This is immediately evident to our end customers," notes Walid Sbaih.

All critical applications at RBK, including the databases and the virtual machines that run critical applications, are automatically backed up at regular intervals throughout the day. For the physical and virtual servers, Data Protector is used as the central backup software. The built-in deduplication process on StoreOnce saves RBK costs on storage capacity and time required for backups. Previous backups use pointers to reference blocks that were already backed up; as a result, the current backup

process has to copy only the data that was newly added or changed. This enables RBK to shorten its backup windows without risking collisions between backup runs.

A particular advantage of the storage and backup solution is, in Walid Sbaih's opinion, the very high performance of its restore functionality. "What good is it if the restore takes an entire day, followed by hours of configuration work? At RBK, we can perform the restore in a few minutes," Walid Sbaih points out.

With Micro Focus Data Protector, the IT team at RBK achieved the desired simplification and standardization of processes for its storage and backup management. "In the past, a lot of manual work was required. The high degree of automation has lightened the load on our IT administrators. We also greatly appreciate the thorough instructions and excellent support we received," said Walid Sbaih.

Automatically generated reports provide a complete log of backup activity, including backup times, results produced, and the time of completion of outstanding backups (for instance, due to ongoing e-mail traffic). Data Protector also helps to identify capacity issues and bottlenecks early on."

The switch to storage, backup and recovery infrastructure has delivered the desired results within the planned budget. The data storage and archiving processes at RBK meet all regulatory requirements for hospitals. The IT department consistently fulfils its service-level agreements. The performance of solution improves the productivity of the users and their work processes. IT administrators at RBK appreciate the manageability of the storage landscape.

In internal surveys at RBK, the IT department achieves excellent marks. "Our work is very well

**“Our IT department is more than just the technical provider.
We want to understand the needs of the user and deliver
the maximum value to the hospital.”**

WALID SBAIH

Chief Information Officer
Robert-Bosch-Krankenhaus

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received, and the satisfaction of hospital staff fuels our motivation,” said Walid Sbaih. “We are keeping an eye on all technologies that serve our needs. Innovations such as cloud or big data could also be of interest at RBK in

the future. Our overall strategy is ultimately to create value for hospital employees and for the entire company. All systems and technologies that serve this objective are of interest to us.

