



“Overall, with the new [Hitachi Adaptable Modular Storage] system, we are able to save about 36,000 euro on electricity for servers, cooling, Uninterrupted Power Supply (UPS) and maintenance over five years.”

*Dirk Saphörster
 IT Team Lead
 St.-Johannes-Hospital*



Kath. St.-Johannes-Gesellschaft (Hospital) Dortmund gGmbH

INDUSTRY Healthcare

SOLUTIONS *Modular Platform, Green Solutions, Virtualization*
Hardware — Hitachi Adaptable Modular Storage 2100
Services — Provided by Hitachi TrueNorth Channel Partner Computacenter

Green (IT) Consolidation: St.-Johannes Gesellschaft in Dortmund Gains Double the Savings with a New Infrastructure

St.-Johannes-Gesellschaft in Dortmund has a rich tradition as a hospital with a history of more than 150 years. In all those years, this 570-bed clinic never forgot to keep up with the times, or sometimes stay a small step ahead of them. The hospital needs an efficient IT infrastructure because the pressures of cost and performance in the health sector are enormous. Those responsible for IT at Kath. St.-Johannes-Gesellschaft Dortmund gGmbH are well aware of these challenges, and they are meeting them with state-of-the-art solutions based on Hitachi modular storage.

Recently, the facility has begun using the Hitachi Adaptable Modular Storage 2100 from Hitachi Data Systems, the most high powered midrange storage solution available on the market for in-house IT. With the introduction of the new storage platform, the hospital was able to achieve significant successes towards the goal of consolidation. The result: fewer systems, less electricity and more performance, all of which contribute to savings in the five figure range.

The Catholic company St.-Johannes-Gesellschaft Dortmund is the sponsoring business of St.-Johannes-Hospital. Besides

this hospital, additional institutions such as an outpatient surgery center, elder homes and youth welfare services are also part of the company. They all share an IT system controlled from St.-Johannes-Hospital. In total, it takes care of eight additional connected facilities. As is customary in healthcare, St.-Johannes-Hospital also has to cope with huge amounts of data; from data of imaging diagnostic procedures to file-based data all the way to mail and data from the hospital information system, Krankenhausinformationssystem (KIS), data from all eight branches are flowing into the storage systems of St.-Johannes-Hospital.

A History of Heterogeneous IT Structures

Since hospitals, just like large enterprises, are not without history and context, the IT infrastructure has been growing for years in response to challenges. Therefore, it is only natural that heterogeneous structures are dominant. However, their management is time-consuming and costly. For this reason, when the maintenance contract of the old system expired, the IT team of St.-Johannes-Hospital, led by Dirk Saphörster, used the opportunity to modernize the architecture of the computer system thoroughly.

Since the previous storage solution worked reliably, the bar for the new systems was very high. "In addition to the convincing price-performance ratio, the primary focus was reliable cooperation among all participants," explained Heiko Börger, who is responsible for onsite implementation at the Hitachi TrueNorth Channel Partner Computacenter. "Moreover, all factors, such as system performance or reliability, also had to meet the highest standards," Börger continued. Data growth turned out to be a particular challenge; each year, around 3TB of new data are added, which have to be archived in auditable storage for a period of 30 years.

"Prior to the system switch, we secured the data first on DVDs and later on Blu-ray disks," Dirk Saphörster explains. "However, over time, this process proved to be confusing.



"The [Adaptable Modular Storage] system arrived preconfigured. We connected the uninterruptible power supply and started immediately with the implementation. Business continuity was ensured at all times."

*Dirk Saphörster
IT Team Lead
St.-Johannes-Hospital*

“The data had to be transferred laboriously over and again due to the inevitable erosion process affecting these data carriers.” The largest amount of data comes from the picture archiving and communication system (PACS), which stores the contents of diagnostic imaging devices. Until the system change, St.-Johannes-Hospital stored data from KIS on hardware provided specifically for this purpose by the KIS supplier.

Consolidation into a Homogeneous Storage Landscape

This multitude of systems meant associated additional operations and management costs for the hospital. With the introduction of Hitachi Adaptable Modular Storage 2100, those responsible for IT were able to establish a central storage instance. The overall design of the cost-effective computer center convinced business management; KIS hardware could be phased out with the exception of the database servers, which are now residing virtually on Adaptable Modular Storage. The entire server virtualization took place via VMware; at this time, 46 servers are virtually mapped. The Microsoft Exchange-based email systems are now also located on Adaptable Modular Storage.

Migration to the new system occurred easily and quietly. Within three days, the switch to Adaptable Modular Storage was accomplished, without failures and without employees being aware of the changeover. Downtime would have affected more than 2,500 employees. Dirk Saphörster was also thrilled by the simple commissioning: “The system arrived preconfigured. We connected the uninterruptible power supply and started immediately with the implementation. Business continuity was ensured at all times.” The team surrounding the head of IT also decided on a powerful connection to the 4GB SAN. This way, no bottlenecks are created.

In addition to the proper connection, a high performance system is required for the new storage solution to be able to meet the demands. Besides the powerful Serial Attached SCSI links (SAS), Adaptable Modular Storage is using a controller working symmetrically in the active-active mode. Contrary to the asymmetrical controllers in traditional midrange storage systems, the Hitachi Dynamic Load Balancing Controller removes otherwise frequently occurring bottlenecks. This architecture ensures high response times by monitoring the use rates of each controller and distributing the loads dynamically.

Equipped for Future Performance and Sustainability

At this time, St.-Johannes-Hospital has around 20TB capacity installed. An expansion is possible at any time without interruption of ongoing operations. As a next expansion phase, the hospital's IT team would like to integrate an archiving system. In addition, there are plans for procuring a second SAN. All other components of the computer center are already redundant, which renders the entire environment effectively immune to failure.

Besides its future viability in terms of the system's strategy, the new infrastructure is also an example with respect to sustainability and energy efficiency. “Adaptable Modular Storage's moderate appetite for energy was also a reason for its purchase,” Dirk Saphörster confirms. “The integrated ‘spin down/spin up’ energy saving function makes it possible to reduce the rotational speed of the discs. Overall, with the new system, we are able to save about 36,000 euro on electricity for servers, cooling, UPS, and maintenance over five years.” Not only the budget, but also the environment is spared. The high recycling rate of Adaptable Modular Storage completes the picture: about 80.4 percent of the installed components are recyclable.

 **Hitachi Data Systems Corporation**

Corporate Headquarters

750 Central Expressway
Santa Clara, California 95050-2627 USA
www.hds.com

Regional Contact Information

Americas: +1 408 970 1000 or info@hds.com
Europe, Middle East and Africa: +44 (0) 1753 618000 or info.emea@hds.com
Asia Pacific: +852 3189 7900 or hds.marketing.apac@hds.com

Hitachi is a registered trademark of Hitachi, Ltd., in the United States and other countries. Hitachi Data Systems is a registered trademark and service mark of Hitachi, Ltd., in the United States and other countries.

All other trademarks, service marks and company names in this document or website are properties of their respective owners.

Notice: This document is for informational purposes only, and does not set forth any warranty, expressed or implied, concerning any equipment or service offered or to be offered by Hitachi Data Systems Corporation.

© Hitachi Data Systems Corporation 2010. All Rights Reserved. SS-249-A DG July 2010