concat AG
IT SOLUTIONS

2008 Preferred Partner hp invent

Prepared for the future
University Hospital Magdeburg

Challenges of today and tomorrow

26 clinics, in which more than 3,000 people are employed as doctors, scientists, nursing – or administration staff, belong to the university hospital Magdeburg. With approximately 1.146 beds, it is the largest clinic in northern Saxony-Anhalt and treats approximately 150.000, in- and outpatients annually. The collaboration between medical research and its clinical implementation guarantee a nursing and care service of the highest standard.

The complete IT-infrastructure is controlled in the medicinal data processing centre (MRZ). Within the framework of the expansion of the hospital's IT-system (KIS) the data processing centre is, in particular, responsible for the operation and the support of the integrated data processing systems and processes. Around the clock and 365 days a year, the individual wards are reliant upon smooth-running, functioning data processing systems. A patient's data has to be accessible immediately in the whole hospital, and at all times. This service offer can only be mastered with the help of a state-of-the-art, at all times scaleable, and high-performance IT.

Due to an increase in data coming from the areas radiology (PACS/RIS), the digital pathology, and applications that are utilized in the hospital, the Magdeburg hospital is expecting a data traffic volume which has to be handled, of up to approx. 1 to 1.5 Petabyte. Through the creation of a highly modular IT infrastructure, particularly the static data was to be outsourced to cost-efficient tape media in order to maintain a virtually constant primary online memory. The central challenge lay in coping with the high data traffic, without continuously having to invest in new storage.

Solutions for the future

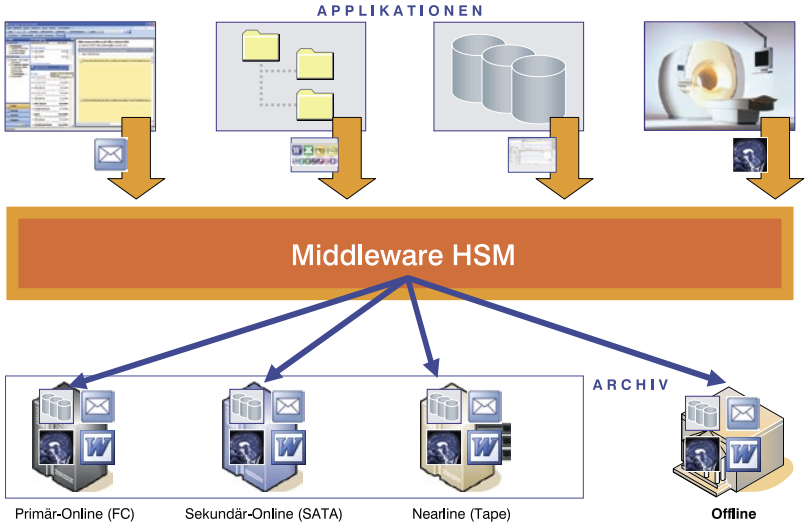
In August 2005, the software system provider Concat AG, in cooperation with Hewlett-Packard GmbH, introduced the concept for the new infrastructure and, already in January 2006, the sub-project was delivered. The project comprises 3 components: introduction of a high-capacity and extremely scaleable SAN-landscape incl. HSM with HP EVA 80000, virtualization of the infrastructure, and storage of emails and files.

The infrastructure manages all of the hospital's core processes failure-resistant and guarantees that outsourced data is on hand for the respective online-process at all times. In future, this HSM will also be employed for the outsourcing of data for downstream e-mail and file-archives.

„We are extremely pleased with the planning and the implementation of the project. The companies involved have proven that they were in the position to realize our highest requirements, both regarding the conceptual consultation as well as pertaining to the technological transfer. We can report that our ambitions to optimize the processes and to completely digitalize the radiology were realized. With the scalable solution, we are now prepared for the enormous data traffic of newer modalities, as well as the digital pathology. The investments are future-proof – they enable us to successively expand the central archive and support us in the undertaking to offer an efficient IT for the complete medical faculty, as well as placing us in a position to fulfill any requirement that may arise in future."

Wolf Henkel, Management MRZ
University Magdeburg

concat AG
IT SOLUTIONS



„Already after a few days we were able to manage the system autonomously and to adapt it to our complex needs. The migration and the connection to our medical systems, which are characterized by the high security and availability requirements, were very successful. The cooperation with HP as manufacturer and Concat as systems integrator has shown that our integrated strategy for realizing these complex projects, in cooperation, was extremely successful."

Dr. Harald Hofmann,
Director Applications Department
and System Integration in MRZ

Within the framework of the first part of the project, a high-capacity and extremely scalable SAN-landscape was designed by means of storage virtualization, and implemented on site as an online storage for the short-term archive of the PACS solution (radiological data). The management for the outplacement of the data into the long-term archive is automatically carried out; for the long term storage, the LOT3 tape technology is employed as the currently most favorable storage.

After the lapse of a concretely defined time span, the data is shifted from the online storage to a low-priced long term storage by means of the HSMProcess. However, the data still remains on hand for the online-process. In order to ensure the data consistency of both the short- and long term archive data, a standardized API was employed with the PACS manufacturer. Any migration is effected online and in a manner that is transparent, without downtime. The overall completion provides for the campus-wide stockage of all arising data throughout the complete hospital by means of two computers centers.

Advantages

- **High cost saving effect** outplacement of data on to LTO3 tape technology and the reduction of energy costs (electricity, climate – „green" IT)
- **Central management** of all implemented components
- **Uninterruptible migration** to future storage media in the archiving-process
- **Multiple usage of the storage systems** for productive-, archive- and backup data
- **High scalability of the complete system,** including the process neutrality within the scope of the data migration
- **Open interfaces** for the connection of additional archive processes e-mail-, file- and database archives.

Dr. Ing. Harald Hofmann
Phone +49 (391) 6715736
harald.hofmann@med.ovgu.de
http://www.med.uni-magdeburg.de

Concat AG
Phone +49 (6251) 7026-0
team@concat.de
http://www.concat.de

