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## Wilhelmstift GmbH Catholic Children's Clinic

**INDUSTRY** Healthcare

**SOLUTIONS** [Modular Platform, File and Content Services](#)  
**Hardware** — Hitachi Adaptable Modular Storage 2100  
**Software** — Hitachi Content Platform



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## Wilhelmstift Children's Clinic Builds Large Infrastructure for Small Patient Data Volume with Hitachi Storage

The Wilhelmstift Children's Clinic in the free Hanseatic City of Hamburg specializes in the treatment of children. However, even small patients generate large volumes of data in the clinic's IT system. A reliable and, at the same time, cost-effective data storage system is therefore a top requirement. The clinic opted for a modern IT infrastructure to ensure accessibility to the growing volumes of data. Its solution focus is on storage virtualization through VMware and Xenserver, and the Hitachi Adaptable Modular Storage 2100 midrange system with integrated archiving using the Hitachi Content Platform from Hitachi Data Systems.

"The system looks after itself. That's the best thing that could happen to a system administrator," says Head of IT at the Wilhelmstift Children's Clinic, Mark Brede, referring to the clinic's newly purchased storage system. The Adaptable Modular Storage 2100 has been operating at the Hamburg clinic since August 2009. Brede's opinion takes on further significance when considering the size of the clinic. Wilhelmstift has over 48,000 patients, making it one of the largest of its kind in Germany. More than 700 staff members are responsible for the treatment and care of children ranging from 0 to 16 years of age. Since the legal requirements

for patient data retention periods range up to 30 years, these considerations are not least among the factors impacting on the large volumes of data.

### Out with the Old, in with the New

Prior to upgrading to the new Adaptable Modular Storage 2100, the clinic stored its data on an Adaptable Modular Storage 200 system. Since service for the old system had expired and performance and storage demands had further increased, Wilhelmstift decided on a replacement. The new IT infrastructure was implemented with the collaboration of solutions partner Computacenter. "Having had extremely

positive experiences with Adaptable Modular Storage 200, our minds were quickly made up in favor of the Adaptable Modular Storage 2100 model," explains Brede. "This allowed us to upgrade without having to stray from the principal concept and start from scratch." The previous practice of combining storage with a Microsoft® Cluster was therefore maintained and transferred to the new system. The migration process took a week, during which the project administrators copied the data offline within approximately only three hours.

### More Performance, Less Hardware

Thanks to the implemented virtualization system, Brede's team was able to bid farewell to the old hardware. Among the key reasons for this was the performance of the new storage system. The Adaptable Modular Storage model uses a dual controller, operating in a symmetric active-active mode. This means, firstly, that a failsafe is available should the controller not function. Secondly, during normal operation the system uses both controllers, making for a significantly higher performance. This approach originated in the enterprise sector where the Adaptable Modular Storage model introduced this kind of technology for the first time in mid-range storage.

The improved performance is noticeable. Services, for instance, can be provided more quickly. "The increased performance



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is particularly obvious in work involving Microsoft Clusters and databases,” says Brede. “Our Clinic Information System (CIS) has been known to automatically process five million data records; that’s where the controller architecture is a particular advantage.” The clinic has further optimized its CIS with its own in-house developments so that data can be obtained even more quickly.

Due to their price advantage, the SATA drives integrated in the Adaptable Modular Storage system offer higher net storage capacity compared to other products. The clinic has access to a capacity of about 20TB in total, 60% of which is presently being used. According to current plans, this capacity is sufficient for the next two years.

### High Speed Archiving and Storage with Data Integrity

The relatively long interval to the next upgrade is partly due to the archiving software. The PACS (Picture Archiving and Communications System) data are densely compressed; Wilhelmstift’s data volume over nine years can be compressed into about 1TB. The clinic has been using the Hitachi Content Platform hardware since March 2010. According to Brede, the archiving system requirements can be quickly summarized: “The Hitachi Content Platform sits there and operates: The decisive system for archiving is the software. However, a drive-based system is important to us due to the data retention time of up to 30 years.”

Systems like Hitachi Content Platform make it possible to change a defective drive, which is signaled automatically by the system, without interrupting operations. Drives also don’t deteriorate like tapes or DVDs, for instance. This advantage enables hard drive archiving to safeguard data integrity and therefore is revision-safe and a faster solution.

The slow speed of a tape library server would theoretically constitute the difference between life and death in extreme cases due to the slow availability of archived patient data. In daily routines, however, experience shows that another aspect plays a defining role: “The speed offered by the archiving system does relieve medical personnel to dedicate more time to the care of the patient,” says Brede. At the end of a day’s work, the Wilhelmstift IT Team can also enjoy the good feeling of having done something for the clinic’s small patients through their reliable and quick management of large data volumes.

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