

S U C C E S S S T O R Y

Hitachi Storage Solutions at Work

Amphia Ziekenhuis

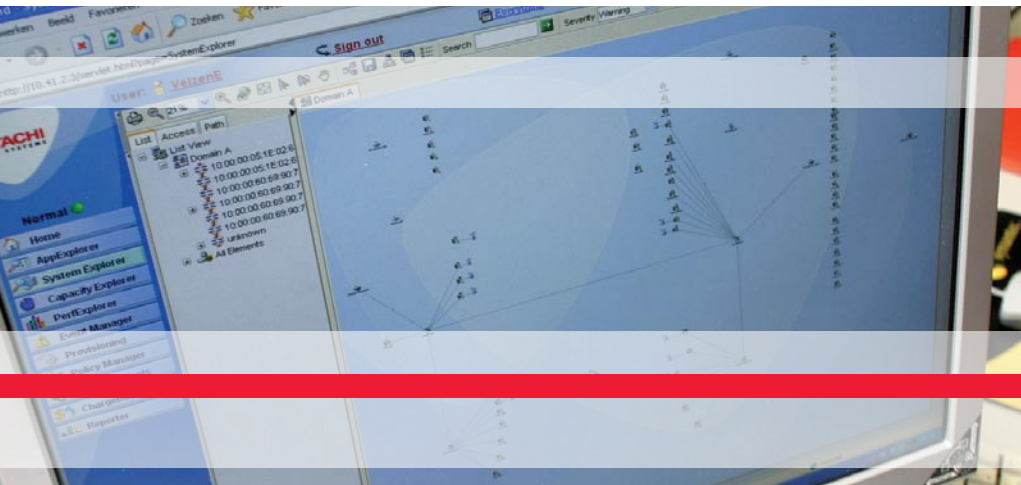
INDUSTRY Health Care

SOLUTIONS Storage Area Management

Hardware—Two Hitachi Thunder 9585V™ modular storage SANs and a Thunder 9570V™ modular storage

Software—Hitachi Storage Services Manager Software, Storage Navigator Program (modular), CCI

Services—Provided by Hitachi Data Systems Global Solution Services



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*Erik van Velzen
ICT Project Consultant
Amphia Hospital*



Amphia Hospital in Breda Implements Modular and Manageable SANs from Hitachi Data Systems

When three hospitals in the Breda region merged in 2001 to form the Amphia Hospital, the entire IT infrastructure had to be revised. All data and systems were accommodated at two different locations. There was an urgent need for greater storage capacity for digital patient dossiers, X-ray images, and scans.

With the purchase of two storage area network (SAN) solutions from Hitachi Data Systems, the hospital now has a scaleable storage infrastructure in place that can grow along with the organisation. And its storage resource management is now simplified by the Hitachi Storage Services Manager software.

Patient Dossiers

As the largest general hospital in the Netherlands, Amphia Hospital offers virtually all medical disciplines through specialised health care professionals and advanced research and treatment facilities. Amphia Hospital offers health care services at three locations in Breda and Oosterhout. The Amphia Hospital service area encompasses over 400,000 patients. Until recently, the hospital worked with paper dossiers for all of these individuals. These documents were stored in an archive where X-ray images and such were also stored.

After the merger, the Amphia Hospital decided to digitally store the patient dossiers along with X-ray and scan records. Erik van Velzen, ICT project consultant of the Information and

Automation (I &A) department, explains why: "Paper storage caused various problems as a result of the different hospital locations. We had rooms full of metre-thick shelving units packed full with patient dossiers. And if a patient had an appointment and a dossier and pictures were required, this had to be known a week in advance so that the patient's dossier could be retrieved from the archive and dispatched to the right location. After the implementation of our new SAN, the X-ray pictures taken in location 1 are now digitally available in location 2."

Everything Online

"The previous infrastructure did not cater sufficiently to the digital archiving requirements of patient dossiers. We were using a Compaq SAN, but for office automation purposes only, so it had to be scaled up drastically. Among the aspects we had to take into account were the gigantic amounts of storage capacity required for digital storage. For a single CT scan, 20,000 small pictures need to be taken. X-rays alone required eight terabytes (TB) of storage capacity.

"Needless to say, the old paper archive had to be digitised as well. This is why we introduced the 'everything online' concept. Everything had to be stored in our new SAN. Presently the amount of consumed storage space is growing by 2TB a year," comments van Velzen.

"We were looking for a storage solution that was modular as well as scalable. Moreover, it had to be a system that could serve us for at least five to seven years. Yul Data Security is our preferred supplier as well as a partner of Hitachi Data Systems. They told us about Hitachi Data Systems."

99.9 Percent Data Availability

The Hitachi Data Systems specialisation in the implementation of infrastructures for large-scale customers was an important consideration. "Their management software, Storage Services Manager, also played a central role since it provides visibility to the entire environment," states van Velzen. "Moreover, the system is not as time-consuming when writing and requesting data, as is the case with competing systems. Storing X-ray images only took two seconds, which exactly matched the requirements of the radiology department. In any case, speed should never be an issue on the SAN side.

"Eventually we decided to purchase three machines: two Thunder 9585V™ ultra high-end modular storage systems for the two primary locations and a Thunder 9570V™ storage system for our test environment. The entire SAN environment has been configured redundantly. Whenever a connection or switch goes down, another connection or switch immediately takes over. As a result, we have a data availability of 99.9 percent," comments van Velzen. Apart from the storage systems, Hitachi Data Systems supplied equipment which included four Brocade SilkWorm 3900 SAN switches and two 3200 SAN switches. Amphia Hospital also uses the following Hitachi software applications to manage its storage environment: Storage Services Manager, Storage Navigator (modular), and CCI.

Quick Return on Investment

The project was a major investment for Amphia Hospital, but it expects a quick return. van Velzen explains, "Our order set us back 750,000 euros, but it resulted in a fast ROI. According to our forecasts, cost savings could be realised in no more than two years time.

"We are able to manage the entire SAN with Storage Services Manager software through a single interface. If a failure occurs somewhere in the infrastructure, we are automatically notified by e-mail via the Hi-Track® Monitor, which indicates when and where the problem has occurred. If a component is faulty, Hitachi Data Systems is automatically notified of this

offered similar solutions, one of the most important considerations for our selection of the system from Hitachi Data Systems was that it is based on open standards. This means that the components we add in the future can be managed using the same tool. Other vendors only offered 'vendor-locked' tools.

"Storage provisioning and capacity monitoring is simplified by Storage Services Manager software. Although the system provides automatic reporting, you can also set notifications yourself. For instance, you can have the system provide notification when 80 percent of a particular component of the infrastructure is used. This is one of the requirements involved in our 'everything online' concept.



"Less storage space is needed because we no longer have to store material on film, thus eliminating the need for expensive DVDs and recording equipment, and neither do we have to develop X-ray pictures and the like. The Hitachi Data Systems solution was the most scaleable and manageable solution,"

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fact. The next day they are on our doorstep with a replacement component. It works like a dream. On one occasion, we left the office in the evening, only to return the next morning to find a Hitachi Data Systems employee with a new component while we hadn't even been aware that something was amiss."

Vendor-locked Tools

Before Amphia Hospital started using the Storage Services Manager software solution, "We were using separate management tools for virtually every component—a tool for the switches, a tool for the racks, you name it. This made it impossible to monitor the entire environment and to identify interrelationships and dependencies, says van Velzen.

"Storage Services Manager software also offers convenient analysis and management reporting features. Although other suppliers

The SAN is not an archiving solution. That is something to which we will have to give thought in the future."

Apart from improvements in management capabilities, the new system has created tangible benefits on the work floor. The infrastructure at Amphia Hospital is now able to adjust for future developments. Says van Velzen: "Patient dossiers are now available at all three locations of the Amphia Hospital. The digitisation of data allows us to work in a location-independent way. In the future, it should be possible to access X-ray pictures and patient dossiers on a national scale as well. And with our current infrastructure, that is definitely something we are able to handle."

Partner Spotlight

About YUL Data Security

YUL Data Security, a Hitachi Data Systems partner, is a data management consulting company. YUL differentiates itself with specific knowledge, products and services that benefit customers by emphasizing the impact of IT choices in the business environment.

YUL Data Security's products and services encompass Data Management, Data Accessibility, Data Availability, and Security. Additional information about YUL Data Security is available at www.yul.nl.

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