Hewlett Packard Enterprise

Objective
Implement a high performance, reliable and cost- effective storage solution

Approach
Investigated the market and based decision on pre-agreed performance requirements and price

IT Matters
- Delivers flexible four tier storage and transparent access to cost effective tape storage
- Ensures vital 24x7 availability, including online updates
- Provides the level of performance required for this demanding environment

Business Matters
- Uses Flexible Capacity pay-per-use to reduce Total Cost of Ownership and cost per GB
- Supports Erasmus Medical Center in offering competitive services to internal departments and to other hospitals
- Enables compliance with government regulations on medical data storage

Erasmus MC finds the remedy for its data storage headache

HPE 3PAR StoreServ Storage is delivered as a Flexible Capacity Service

Technology is now an integral part of improving the delivery of healthcare services but that means hospitals are facing a data explosion. With its data volumes increasing by 1TB a day, Rotterdam's Erasmus Medical Center found the answer to its storage needs with pay-per-use HPE 3PAR StoreServ Storage.

Challenge

Rapid data growth
Technology is now an integral part of delivering efficient healthcare services, but the backlash of this is that hospitals face an explosion in the amount of data they need to manage. This is a huge and ever increasing challenge for Rotterdam's Erasmus Medical Center (MC), which has generated the same amount of data in the last two years that it had generated in the previous 35 years.

Erasmus MC is the city's university hospital and is the largest and most versatile of the eight university medical centres in the Netherlands. Employing 14,000 staff, including 1,300 physicians and 3,000 nurses, it operates from various locations in Rotterdam, including the Sophia Children's Hospital and the Daniel den Hoed Cancer Institute. With almost 1,100 beds, its main objectives are patient care, research and education and it ranks as the top European institution in clinical medicine.

Case study
Erasmus Medical
Center

Industry
Healthcare

Page 2

> "Our storage system has to be reliable, flexible, performant and the right price. All of these requirements are met by HPE 3PAR StoreServ Storage."
>
> — Nico Drost, IT director, Erasmus Medical Center

Also providing services for Rotterdam Eye Hospital and the Rijndam Rehabilitation Center, Erasmus MC's IT team supports almost 13,000 PCs, has over 70,000 active network points, more then 300 operational databases, 1,000 physical and virtual servers and 500 applications.

"We produce about 1TB of new data each day," explains Nico Drost, IT director at Erasmus MC. "The office applications are only a small part of what we do. We maintain the financial systems, personnel systems, patient systems.

"A long time ago we only had text-based IT so no multi-media was stored, but in the last ten years that has changed.

"For example, we now have Genome applications which enable us to analyse patients' blood specimens and chart their DNA. This is all done as an image and every patient record is about 1.5TB of data. With 2,000 patients, that alone would require 3PB of storage."

Erasmus MC needed an overall solution that would boost the efficiency of its IT environment while reducing complexity, and a vital component of that was a versatile storage infrastructure that could scale both up and down.

This is particularly important in the Netherlands where it is a legal requirement to store relevant patient data for 115 years and there are many compliancy issues surrounding medical data.

Solution

Flexible delivery
After going out to tender and measuring vendors against agreed performance requirements, Erasmus MC signed a five year IT pay-per-use agreement with Hewlett Packard Enterprise, covering a range of Converged Infrastructure solutions and services. Phase One of the architectural build-out has replaced the previous end-of-life HPE EVA storage with one HPE 3PAR StoreServ 10000 storage system and one HPE 3PAR StoreServ 7400 Storage system with total capacity of 1PB.

The agreement includes Storage Area Network (SAN) switching and HPE ProLiant BL460 blade server, and HPE has also delivered an on-site private cloud solution with proactive support and consulting, to provide Microsoft® email and agenda functionality on a pay-per-use basis for the centre's 22,000 mailboxes.

Case study
Erasmus Medical
Center

Industry
Healthcare

Page 3

Storage is in four tiers - fiber channel, near-line, soft disc and tape. The primary tier is based on an HPE 3PAR StoreServ 10800 Storage system at the main data center with a smaller HPE 3PAR StoreServ 10400 Storage system at the secondary data center. Some data is directly replicated between the sites and Erasmus MC uses HPE 3PAR Remote Copy software which provides autonomic replication and Tier 1 disaster recovery technology.

To reduce the cost per gigabyte, a Quantum StorNext hierarchical management layer has been introduced on top of the 3PAR StoreServ Storage so most of the data now goes from production to disc for intermediate retrieval, and to tape archive for long-term retention. The hospital's Picture Archiving & Communication System (PACS) has its own separate storage.

The storage equipment is provided under an HPE Flexible Capacity agreement, whereby HPE retains ownership but Erasmus MC pays according to how much data it stores. HPE uses StorNext to manage capacity, ensuring that there is always a ten percent buffer. Alerts are triggered when the 80 percent threshold has been broken and the next capacity block is signed off.

Benefits

Cost effective and reliable
HPE 3PAR StoreServ Storage delivers the stability and reliability that is vital for this 24x7 hospital environment.

"HPE 3PAR StoreServ Storage delivers better performance and guaranteed uptime than the previous system and was the closest fit for our performance requirements," says Drost.

"Updates can now be done online when previously we had to go down for several hours. Also, the advantages of pay-per-use with are enormous. We used to have a utility ready storage solution and we were not able to predict the amount of storage volume required. With Flexible Capacity, we can easily anticipate the capacity we need which means we no longer have a lot of unused storage and only pay for what we use, and that saves money."

Costs are also kept down by the archiving system suggested by HPE. Erasmus MC benefits from cheaper tape storage but its researchers and other staff can have access to their tape-based data transparently, as though it was on primary storage. This is made possible by HPE Linear Tape File system which makes tape self-describing, file-based, and easy-to-use.

Customer at a glance

Hardware
- HPE StoreEver ESL G3 Tape Library
- HPE ProLiant BL460 Gen8 blade server
- HPE 3PAR StoreServ 10000 Storage
- HPE 3PAR StoreServ 7400 Storage
- HPE ProLiant BL460 G7 blade server
- HPE BladeSystem

Software
- Quantum StorNext
- Linear Tape File System
- HPE 3PAR Remote Copy

HPE services
- HPE Flexible Capacity

"Using on-demand HPE Flexible Capacity means that we no longer risk running out of storage capacity or having too much money tied up in unused storage."

— Nico Drost, IT director, Erasmus Medical Centre

It provides the ability to use standard file operations on tape media for accessing, managing and sharing files with an interface that behaves just like a hard disk.

This stable and flexible solution combined with trustworthy capacity management enables Erasmus to not only provide cost-effective storage for its own internal departments, but also supports it in offering competitively-priced storage to other hospitals as a service provider.

Its reliability and availability also allow Erasmus MC to comply with the government's stringent regulations on the storage of medical and research data.

"Using HPE 3PAR StoreServ Storage to support a four tier storage solution is providing us with a high level of flexibility," concludes Drost.

"It's meeting all our requirements and we don't receive any complaints from our hospitals regarding their documents and images that are stored on the system. It's all going well."

Learn more at
hpe.com/storage
hpe.com/services/fc

f y in ✉

Sign up for updates

★ Rate this document

Hewlett Packard Enterprise