Hitachi Data Systems Solution Ensures that Healthy Data Growth Causes No Headaches for Actelion

Like all research-based pharmaceutical companies, Actelion Pharmaceuticals, Ltd., has to fulfill increasingly strict public healthcare system requirements, while guaranteeing uninterrupted operation and complying with an increasing number of regulations. In addition, clinical trials are becoming more and more complex due to the growing number of requirements imposed by the regulatory authorities, insurers and patients in terms of safety and efficacy. These circumstances have led to a rapid increase in the quantity of data that the company had to process and archive. To address these challenges, Actelion turned to a solution based on Hitachi modular storage and Hitachi file and content capabilities.

Bringing any drug onto the market involves a long period of intensive and expensive research and development. However, because of the complicated approval processes in Europe and the USA, the number of new drugs on the market is steadily decreasing. Companies in the pharmaceutical industry are therefore increasingly focusing on differentiation and on new ways of improving their efficiency and productivity. These measures range from new research methods and innovative technologies to optimization of business processes and IT architecture.

The Swiss company Actelion, with headquarters in Allschwil, is a good example of how to carve out a strong position in this tough, competitive market. The company specializes in research into and development and marketing of “orphan” drugs. These drugs are used to treat rare diseases that, until now, could only be treated to a limited extent. Its niche positioning has guaranteed the manufacturer
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Serge Kielwasser
Senior Storage Engineer
Actelion Pharmaceuticals, Ltd.

healthy growth in recent years. Since 2000, Actelion has been a listed company, operating with more than 2400 employees across more than 25 branches worldwide.

**Actelion Seeks Optimization for Savings and Efficiency**

When researching answers to its data growth challenges, Actelion recognized the potential savings to be gained by optimizing its IT systems and began overhauling its storage environment to increase efficiency.

The company opted for a hardware solution comprising Hitachi NAS Platform (HNAS) 3080, Hitachi Adaptable Modular Storage (AMS) 2500; and Hitachi Content Platform (HCP) 500. For onsite support, Actelion decided to draw on the expertise of the system integrator LANexpert, a company that has worked closely with Hitachi Data Systems for a number of years.

**Capacity Limits as an Indicator**

In recent years, the amount of data processed and archived by Actelion has grown by 60% each year. In laboratory technology alone, every step is documented so that changes and experimental stages can be evaluated. Then there is data from development, marketing and sales, as well as from enterprise resource planning (ERP) programs to business applications.

Effective management and correct handling of data poses a tough challenge, particularly in widely dispersed IT environments like Actelion’s.

In the medium term, the company’s storage environment would not have been able to respond flexibly enough to the changing business requirements. The situation was aggravated in particular by the rapidly growing volume of unstructured data in the area of file services. “For network attached storage (NAS) support of the CIFS and NFS communications protocols, new, more powerful and more flexible solutions were needed,” explains Falko Herbstreuth, IT architect at the system integrator LANexpert, describing the situation at the start of the project. It had also become disproportionately expensive to maintain the system.

In light of these developments, the IT managers at Actelion decided to explore a new, scalable solution that would be able to keep pace with the growing volume of data and deliver adequate performance.

The aim was to reduce costs and keep the complexity and risks as low as possible.

Research and office data, databases, enterprise resource planning (ERP) programs and business applications need to be not only stored reliably and quickly, but also managed efficiently. The company opted for a combination of several scalable storage solutions from Hitachi Data Systems and the onsite support provided by LANexpert.

**Optimized Performance With a Combined Solution**

In May 2010, a Hitachi NAS Platform 3080 cluster and Adaptable Modular Storage 2500 were implemented at the headquarters in Allschwil, Switzerland. The main challenge during the implementation was to keep downtime to a minimum, from setting up the storage elements to migrating the first block- and file-based data. The implementation went smoothly, and all departments, from research to sales, were able to continue working without any loss of performance.

“During the upgrade process, not only were we impressed by the high-quality storage solutions, but the complete package of hardware, software and support from Hitachi Data Systems and the implementation provided by LANexpert also exceeded our expectations,” says Serge Kielwasser, senior storage engineer at Actelion.

Access to the central AMS 2500 storage system is provided either directly via SAN on a block basis or via the HNAS 3080 platform with the CIFS and NFS file systems. This guarantees optimal performance for the different types of data at all times. The newly implemented systems are used consistently for all types of data:

- Unstructured data, such as research and office data, images, graphics and media files.
Structured, block-based data, such as data from ERP programs, databases and applications.

Semi-structured data, such as Lotus Notes e-mail data.

To optimize costs, dynamic tiering of files across various classes of storage, including archiving, was implemented via a fully integrated hierarchical storage management (HSM) solution. As part of the system expansion, Actelion also invested in new 5100 switches from Brocade. A total of 260TB of raw storage capacity has been created as a result of the restructuring measures carried out to date, divided between high-performance SAS and capacity-optimized SATA drives.

“As a research-based pharmaceutical company, we have to think long term,” says Kielwasser. “By restructuring our entire infrastructure, from the servers to the storage systems, we have secured a long-term level of system performance that is adequate for the current state of our company’s development.”

In spring 2011, Hitachi Content Platform 500 was also implemented. The object-based HCP storage solution extends the existing storage environment with the addition of an intelligent, content-oriented system for long-term storage. Actelion uses HCP for compliance archiving and is already storing its human resources (HR) data there using the Kendox HR application. The idea is that, in the future, email environments could also be archived on HCP 500. This will allow the company to fulfill the requirements regarding secure, static storage of important company data over a long period of time.

The broad scope of the services, which include compliance certification, means that future requirements for long-term archiving can also be met. Because of Actelion’s rapid growth, a number of additional expansion measures are already scheduled for 2011. For this expansion, the close collaboration with Hitachi as a manufacturer and storage supplier and with LANexpert as a system integrator is particularly important to Actelion. This strong partnership enables the company to overcome the day-to-day challenges it faces in a dynamic and rapidly changing environment.