The previous IT infrastructure in place at Toto-Lotto Niedersachsen GmbH had grown into a heterogeneous structure over the years. In some cases, the storage components could no longer be maintained, and required an increasing amount of outlay in terms of administration. For this reason, in the spring of 2010, the project team began to search the market for alternatives.

“We were on the lookout for extremely reliable and secure systems. Toto-Lotto Niedersachsen achieved a turnover of around EUR 680 million in 2011. Without a properly functioning IT system, our company would not turn over a single cent; the entire game business in around 2,300 sales outlets depends on it,” explains Head of Data Processing and Technical Gaming Operations at Toto-Lotto Niedersachen, Andreas Schröder.

In addition to these challenges, the focus was also on consolidating the system landscape. Other key factors in the search for the new storage and archiving systems included ensuring the protection and integrity of data, as well as high levels of reserve capacity. It was clear from the outset that the new systems would have to take on other tasks quite soon after commissioning. For this reason, in the spring of 2010, the project team began to search the market for alternatives.

Hitachi Storage and Archiving Solution Ensures Smooth Operations for Germany-based Lottery, Toto-Lotto Niedersachen

“Like winning the lotto” is a familiar phrase, and one that highlights the game’s popularity. Toto-Lotto Niedersachsen GmbH is responsible for processes in the German state of Lower Saxony that support 2 popular weekly lottery draws. To upgrade and ensure a smooth-operating IT infrastructure, the company enacted an intensive selection process in 2010 and chose a solution offered by COMPAREX, a Hitachi TrueNorth Partner. As a result, 2 Hitachi Adaptable Modular Storage 2300 and 2 Hitachi Content Platform systems have been storing and archiving the data Toto-Lotto Niedersachsen produces since June 2011, in a mirrored data processing center.
SUCCESS STORY

The [Hitachi] solution far exceeded our expectations, which are based on years of administration experience in environments with sensitive, high-performance cluster architectures.

Andreas Schröder
Head of Data Processing and Technical Gaming Operations
Toto-Lotto Niedersachsen

reason, open interfaces, a level of scalability, and the ability to expand the systems with ease were also included in the specifications.

Reputation Achieved Through IT

In order to give all of these factors sufficient consideration, Toto-Lotto Niedersachsen examined and compared storage systems from 5 major manufacturers, starting in April 2010. Data and information provided by Gartner MarketScope was also used to help the company reach a decision.

In the summer of 2010, Schröder invited the vendors to present their solutions. The concept was ready at the end of September, and in November 2010, Toto-Lotto Niedersachsen opted for the Hitachi storage solution proposed by COMPAREX. Symmetric active-active controllers with automatic load balancing and the SAS back end stood as a guarantee of high performance from the Adaptable Modular Storage (AMS) 2300 systems. The AMS systems also provided the capacity to migrate volumes during ongoing operations, and thus eliminate interruptions.

The guaranteed security of Hitachi Content Platform (HCP) played a particular role in the company’s decision. “The open interfaces and multitenancy of HCP are essential aspects for delivering a truly future-proof solution. But what impressed us above all was the numerous security certifications,” Andreas Schröder goes on to say. “Security is important to us; after all, Toto and Lotto are closely tied to a vendor’s reputation. People will only trust us if we can guarantee data is protected and provide security against manipulation.”

“That’s why COMPAREX and HDS even supplied a certified copy of the certificate of an independent auditor as a special service,” explains Dr. Stefan Fries, who supervised the project at COMPAREX. The efforts in terms of guaranteeing security are paying off: Toto-Lotto Niedersachsen is rightly proud of the recognition it has gained for its functioning IT security concept from the World Lottery Association. The IT environment is so secure that even company employees are permitted to play the lotto game.

Careful Planning, Seamless Migration

Once the final decision had been made, the company took a brief hiatus before migration to handle another high-priority project. By testing and connecting Symantec Enterprise Vault and Easy Archive via HCP open interfaces, the outlay for administration and for commissioning the systems was kept at a low level. All applications could be incorporated immediately, without the use of proprietary interface software. This capability was vital in order to meet the tight migration window: Two days in June 2011 was all it took to migrate the system over to AMS and HCP.

A very small proportion of the changeover took place in the evenings, without affecting ongoing operations, despite the extensive software landscape. A whole host of operating systems are used, including OpenVMS, Microsoft® Windows Server® 2003 and 2008, as well as different Linux derivatives and Sun Solaris. Add to that a relatively large number of solutions in terms of applications for accessing the storage and archive facilities, with Oracle RDB, Microsoft SQL Server®, MySQL and various backup and archiving systems.

The project team was able to complete the final system checks well ahead of time, as all the systems were running without any errors whatsoever. Schröder is delighted: “The solution far exceeded our expectations, which are based on years of administration experience in environments with sensitive, high-performance cluster architectures. There was not a single phone call from any of our 180 employees,” he confirms.

Particularly significant is the fact that efforts to simplify and merge systems and processes have also been extremely successful. Administration costs were cut by 30% by consolidating online storage systems compared to using the old system structure. Capacity utilization has increased, as has the efficiency of the systems. “The SAS architecture of AMS systems has also enabled a significant increase in performance,” says Solutions Strategy Manager at Hitachi Data Systems, Dr. Georgios Rimikis.

Mammoth Task for the Game Business

Despite the consolidation and reduced administrative costs, the team led by Schröder does not have 30% less work to do: The capacity gained in terms of performance and administration has been earmarked for upcoming projects.

In 2011, the new ESX Server from VMware was linked to the HDS solutions, and the system was converted to an optical document archiving solution. On top of that, plans to start using the new infrastructure for data from the Toto-Lotto business were made for 2012. These plans included connecting more than 2000 sales outlets directly to the storage systems.

Both AMS and HCP systems are equipped to handle the incoming data, with the emphasis being less on the volume of data than on the I/O load. The systems must
be able to process as many as 250 tickets per second at peak times. This calculation is based on 6 game tickets being sold per minute at each sales outlet. In this process, 1 game ticket is responsible for 110 to 120 I/Os. Thanks to the new storage and archiving solutions, Schröder and his team need not worry.

Innovation is the engine of change, and information is its fuel. Innovate intelligently to lead your market, grow your company, and change the world. Manage your information with Hitachi Data Systems.