



“The transparent failover solution was the main factor in our decision to work with Fujitsu. It would enable our services to continue running uninterrupted in the event of an error. That was important to us.”

Markus Handschuh
Head of IT System Operations
REWE DORTMUND

Installing a FUJITSU Storage ETERNUS DX500 system has dramatically improved REWE DORTMUND's I/O times.

At a glance

Country: Germany
Industry: Food retail
Founded: 1913
Employees: 1,500
Website: www.rewe-dortmund.de/



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Challenge

The company's existing storage system had reached the limits of its capacities, and slow access times had led to it becoming something of a bottleneck. Expanding the system would have proved expensive and would not have left a buffer for further developments down the line.

Solution

The company chose to convert to a FUJITSU Storage ETERNUS DX500 storage cluster with transparent failover for all applications, including its business-critical warehouse management and inventory control systems.

Benefit

- Transparent failover solution ensures maximum availability
- High performance solution for business-critical applications
- Internal cache allows applications to run on nearline SAS drives
- 16GB Fiber Channel connection ensures high performance levels
- At least 120,000 IOPs



Customer

REWE DORTMUND Großhandel eG is an independent, regional cooperative under the REWE Group umbrella. Its almost 300 supermarket outlets supply some 512 markets in the German state of North Rhine-Westphalia, particularly in the Ruhr, Lower Rhine, Sauerland and Münsterland regions. The company focuses on locally made products in order to support the local economy, secure jobs and keep transportation distances as short as possible.

Products and services

- 2 x FUJITSU Storage ETERNUS DX500
- Two sets of 46 x 800GB SSDs
- Two sets of 116 x 900GB SAS drives
- Two sets of almost 150TB of usable storage, to be expanded by a further 40TB in early 2017
- Two sets of 20 x 4TB nearline SAS drives
- 124,000 IOPs
- 1.3 millisecond response time
- 16GB Fiber Channel connection

Challenge

The backbone of REWE DORTMUND's existing IT infrastructure was a storage cluster dispersed across two separate sites, but the rise in demand caused by the company's consistent growth meant that within just three years, it was already unable to cope. Peak I/O rates had reached their limits. "The old system was simply no longer powerful enough, and the time buffer it gave us was insufficient for certain applications," explains Markus Handschuh, Head of IT System Operations, REWE DORTMUND. The company could no longer keep up with demand on business-critical systems such as its warehouse management and inventory control applications. One option Handschuh had to resolve these performance issues was to replace the head nodes. However, replacing them with SSD storage or similar would have proved far more expensive than purchasing a brand new storage solution.

Solution

The company chose to convert to a FUJITSU Storage ETERNUS DX500 storage cluster with transparent failover and 150TB of storage at each of its two data centers. This now serves some 2,000 users. The storage cluster covers all of the company's requirements. REWE DORTMUND's warehouse management and inventory control applications are particularly critical to its operations. It also uses Exchange servers and archives in nearline storage. The Fujitsu transparent failover solution was the main factor in REWE's decision to work with them. The IT team first saw the solution at the Fujitsu Demo Center, and were very impressed with the high level of availability it provided. "The transparent failover solution was the main factor in our decision to work with Fujitsu. We determined that it would enable our services to continue running uninterrupted in the event of an error. This means that a database server, for example, will now continue working without issue even after a failover. That is important to us," explains Handschuh.

Another factor that set Fujitsu apart was the support it could offer. The REWE DORTMUND team felt very well-informed prior to the installation, and this has continued through to daily operation. Fujitsu's proactive support service ensures that even if individual components fail overnight, a notification is waiting in the morning and replacement parts are already on their way. "It works really well," says Handschuh.

Additional factors in his decision matrix included the level of performance the system could deliver in day-to-day operation and that he would have the option to operate it with a 16GB Fiber Channel connection.

Fujitsu's ability to supply a German-speaking support team 24 hours a day, seven days a week, and REWE's positive experiences with the Fujitsu partner Computer Stamm, also played a role. "We liked the simple licensing model Fujitsu offered, and we took the replacement costs and expandability into account too," adds Handschuh. Alongside all of these technical criteria, the cost-effectiveness of the solution was also critical to the decision.

Benefit

The most important benefit for REWE DORTMUND is the dramatic improvement it has seen in terms of performance. This is particularly evident in the processing times for the ordering system and similar areas where there is a daily peak. "The processing time with the current Fujitsu system is now six seconds per 100 order items. With the old system, this was more like 15 to 18 seconds," says Handschuh. REWE DORTMUND also now has a system that it can continue to expand cost-effectively even after three to five years. "The system met my expectations in terms of the performance of the SSDs, and when it comes to the nearline SAS drives, it exceeded them considerably," continues Handschuh. As they have their own cache, the nearline SAS drives are now fast enough to run applications. This reduces the day-to-day load on the overall system. The expandability of the solution has also proven its worth. Additional demands in various departments have meant that the company has already needed to increase its capacity, and has placed an order for additional storage media. Handschuh's experience working on this storage project with Fujitsu has been so positive that he is already considering working with the company again in other areas.

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