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Leading German Research University Powers Education with Solid SAN Solution

QSAN

Challenge

The university's existing storage infrastructure was nearing the end of its useful lifetime. It was reaching maximum capacity, not providing enough sustained performance and needed upgrading to accommodate rapidly growing amounts of data.

Solution

An open, flexible storage solution based on Western Digital Ultrastar® Data60 hybrid storage platform and QSAN XCubeSAN dual HA SAN storage system.

Key Results

The combined solution makes it easy for the university to meet capacity and performance needs without breaking the budget. This joint solution delivers great performance, is easy to scale on demand and provides higher storage reliability thanks to Western Digital's innovative technologies.

Organization Profile

This high-profile German university which operates at a European level is research-oriented and committed to contributing to society by providing high-quality research and educational opportunities. Its guiding principle is that in order to generate scientific knowledge, close links between research and teaching must be cultivated.

Meeting Immediate and Future Data Storage Needs

It was extremely important for the university to find a top-notch storage solution to cope with their growing data storage needs. The university needed a flexible, reliable and easy-to-scale storage infrastructure that met the following mandatory requests:

—Highly-availability FC SAN storage

—Multiple 16G FC SAN ports with multipathing

—Fully tested with VMware®

—750TB initial usable capacity, upgradeable to 3PB usable capacity

—Strong performance at fixed maximum latencies

—Short RAID rebuild times at full load

QSAN, Western Digital and Zstor® Team up to Deliver a Modern Data Experience

To address these challenges, the university turned to its trusted technology partner, Zstor GmbH, for assistance. Zstor is a leading IT System Integrator providing high-performance and cost-effective data center solutions to universities and research institutes. The experts at Zstor designed a powerful storage architecture based on the QSAN XCubeSAN dual HA SAN storage system and the Western Digital Ultrastar Data60 hybrid storage platform. QSAN Technology, a leading storage technology designer and manufacturer, strives to build enterprise-class storage systems that provide outstanding performance, secure data protection and comprehensive data management. The QSAN XCubeSAN provides a high-quality data storage system that is simple, secure, scalable and reliable. In addition, QSAN brings a multitude of enterprise features to make storage applications more efficient, including SSD read-write cache (QCache), auto-tiering (QTering), snapshot (QSnap), local volume clone (QClone) and features to improve data acceleration and protection.

"The XS5212D is a full-featured dual HA SAN system that helps us to improve efficiency, performance and manageability in our storage operations. We also like that it can be easily expanded in the future by adding additional Western Digital JBODs"

University IT Manager

"It will definitely allow our customer significant growth and the ability to handle more workloads for the next few years and beyond"

Carsten Brandhorst
System Engineer, Zstor GmbH

Western Digital Better Together

To improve the reliability and efficiency of this critical storage infrastructure, Zstor selected the Ultrastar Data60 hybrid storage platform filled with Ultrastar HelioSeal® hard drives. The Ultrastar Data60 includes unique technologies not found in any other storage platform: patented IsoVibe™ and innovative ArcticFlow™. IsoVibe reduces vibration-induced performance degradation, while ArcticFlow overcomes the heating issues by introducing cool air into the middle of the platform. Combining these technologies with HelioSeal hard drives provides a solution designed for long-term reliability and reduced drive failures, enabling the safekeeping of all the digital content stored on the platform. Western Digital Ultrastar platforms provide a simple, affordable storage solution for QSAN environments which reduces power consumption, improves reliability and lowers TCO.

Immediate and Powerful Results

The combined solution of QSAN XCubeSAN with Ultrastar Data60 provided the university with a powerful storage solution that delivered all requested features with a full certification for VMware. Pairing the QSAN HA dual SAN Controller with Western Digital Ultrastar Data60 enclosures allows the university to meet high capacity demands and allows for future upgradeability and extensions. With 120x 12TB[1] HDDs per dual controller, the demanded performance was met at all times, even without hitting the cache. The RAID60EE technology also allowed for both space-savings and cost-savings, while significantly reducing RAID rebuild times and avoiding impacts on daily operations.

Get Started

For more information on how QSAN and Western Digital work together to enhance your data storage infrastructure and improve your business operations, visit westerndigital.com/platforms.

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[1] One GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes). Actual user capacity may be less due to operating environment.