



# LEADING RESEARCH UNIVERSITY CHOOSES NEXSAN UNIFIED HYBRID STORAGE FOR PERFORMANCE IN A VIRTUALIZED ENVIRONMENT

Case Western Reserve University had an immediate need for a storage system that provided high-performance, high-capacity, availability and reliability with no single-point-of-failure. Nexsan NST5000 Unified Hybrid Storage met all their requirements.



CASESTUDY

## CUSTOMER OVERVIEW

Founded in 1826, Case Western Reserve University is a private research university located in Cleveland, Ohio, USA with a strong reputation as one of the nation's leading, independent research universities. Case Western Reserve remains the only independent, research-oriented university in a region bounded by Pittsburgh and Rochester on the east, Nashville on the south, and Chicago on the west, Case Western Reserve holds membership in the Association of American Universities.

With an endowment of more than \$1.4 billion, Case Western Reserve supports about 100 designated academic and research centers, and receives nearly \$400 million in external research awards each year. Their eight schools and college offer close to 200 top-ranked undergraduate, graduate, and professional programs that range from arts, law, and humanities to engineering and medicine.

According to U.S. News and World Report: America's Best Colleges, Case's undergraduate program is ranked #1 in Ohio and #38 among national universities, including health law and social work at #8 and biomedical at #10. In addition, the university has been rated #7 in the Washington Monthly College Guide (2011) and recognized in The Princeton Review's Guide to 322 Green Colleges (2012).

## BUSINESS SITUATION

With research comes data and with data comes the need for reliable storage. Case's research efforts involve large stores of raw research data, variable size stores of intermediate type data and small stores of results data. Brian Christian, Senior Technical Lead in the Information Technology Services Design Group at Case Western Reserve University, was tasked with finding a solution that would support 200TB of storage today and scale up to a petabyte tomorrow.

Christian explains: "The Nexsan NST5000 was a perfect fit for Case's needs. It met all of our availability and reliability requirements. We can do rolling upgrades with no downtime and survive single points of failure. It offered the best price/performance of any solution we evaluated and it can grow and scale with us. Plus, it was available for use immediately vs. being on some vendor's product roadmap."

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## BRIAN CHRISTIAN

SENIOR TECHNICAL LEAD, CASE WESTERN RESERVE UNIVERSITY



## ENVIRONMENT

- Two NST5300 Hybrid Storage Systems
- 200TB of block and file data
- HPC Cluster architecture
- Plans to deploy VMware

## NEXSAN NST5000 SERIES BENEFITS

- iSCSI block and NFS/CIFS shared folders
- Up to 54,000 IOPS for as low as \$.65/GB
- Scales to 5PB
- Caching acceleration technology
- Snapshots
- Replication
- Thin Provisioning
- Online capacity expansion
- Enterprise-class reliability

## NEXSAN NST5000 STORAGE SYSTEM

The Nexsan NST5000™ Unified Hybrid Storage system delivers exceptional performance without the capacity limitations and high price points of SSD-only solutions. Nexsan's Hybrid Storage with caching acceleration technology intelligently optimizes caching by utilizing DRAM, NVRAM and flash-based solid state memory, along with spinning media, to multiply random I/O performance. The system delivers true high performance for block and file data, sending both types of traffic through the NST5000 high-end solid-state-based controllers. The results are high performance for both sequential and random I/O at a price near that of a system that uses spinning disks alone.

## RESULTS

Nexsan's NST5000 was the right fit for Case's needs. Reliability, capacity, scalability, and performance; the NST5000 met and exceeded each of these requirements while remaining affordable and immediately available. Nexsan's solutions can now be found campus-wide at Case Western Reserve University where multiple research groups support a variety of data storage needs including imaging, data transfer, archiving and a high-performance computing (HPC) cluster. Case is also expanding a VMware virtual server environment that will be supported by Nexsan.