

Facilitating the Research Lifecycle

At the **University of Miami**, more than 2,000 researchers, faculty, staff and students, across multiple disciplines, collaborate on diverse and interdisciplinary projects requiring HPC resources.

The **University of Queensland** has infinitely scalable storage capacity available to keep pace with increased use of high-end microscopy and next-gen sequencing technologies for fast, multi-site data access.

The **University of Michigan** uses DDN solutions to support an increasingly diverse set of research projects spanning from machine learning, connected and automated transportation, and precision health to computational flow dynamics, physics and more.

DDN storage fuels groundbreaking neuroscience and behavioral research at **Harvard** by accelerating the collection of data-intensive research generated by the world's fastest scanning electron microscopes.

Academic Research

No other field generates data on the scale of academia and its institutions' multi-disciplinary research programs. Areas like genomics, molecular biology, fluid dynamics, and particle physics hold tremendous potential to change the world. However, this is only possible if they can successfully access, mine, and share the mountains of data being created and avoid the creation of single purpose data lakes. Now, universities and research institutions are increasingly turning to AI to unlock insights contained in those massive datasets. AI adds another tool to drive academic discovery based on data analysis and complements existing simulation-based methods, increasing precision of results.

With this AI-led progress come the complex demands for an increasingly sophisticated infrastructure. Research institutions are turning to DDN's zero-bottleneck parallel data paths to help perform the kinds of analysis needed for breakthrough applications. Throughout the discovery process, DDN innovative storage solutions deliver the large-scale data at speeds that are required to ingest, store, and distribute previously unheard-of volumes of raw data. These solutions also support the rising use of GPU hardware to run mixed-precision simulation algorithms.

The Right Infrastructure Matters

Modern workload I/O patterns are increasingly mixed and tough: reads and writes, random and sequential, high thread counts, shared file access. The academic research community needs a new level of infrastructure that provides storage capacity, performance, and access that matches the raw processing power of the supercomputers typically on their sites. DDN understands the essential elements of software, processor architecture, clustering, high-speed networking and collaborative learning that shape the landscape in academic research.

For more than 20 years, DDN has been delivering complete campus-wide, departmental and cloud storage solutions to hundreds of universities around the world. DDN solutions place an emphasis on accelerating difficult I/O patterns and small I/O operations, combining sophisticated technology with an in-depth understanding of the diverse requirements in academic research. DDN provides infrastructure that is robust enough to facilitate data sharing across different media, environments, and locations in the research lifecycle. With DDN cutting-edge storage solutions, those in the field of academia are fully leveraging at-scale data and turning it into a strategic asset supporting breakthroughs that improve the lives of countless people around the world.



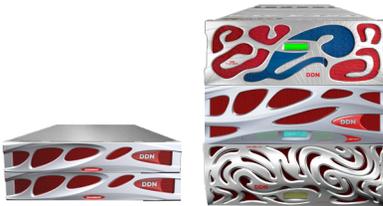
A³I

DDN A³I storage solutions are fully-optimized to accelerate machine learning and artificial intelligence (AI) applications, streamlining deep learning (DL) workflows for greater productivity. Working with industry leaders like NVIDIA and Hewlett Packard Enterprise (HPE), A³I artificial intelligence storage solutions harness the knowledge from customer-proven deployments to make AI-powered innovation easy. A³I is a turnkey, AI data storage infrastructure for rapid deployment, featuring faster performance, effortless scale, and simplified operations through deeper integration—all backed by the data-at-scale experts.



IME

IME delivers up to 1000X application and file system speed-up with the world's most advanced application-aware I/O acceleration software, removing randomness out of workflows and reducing uncertainty and erratic performance in the cluster. This break-through storage application eliminates POSIX contentions, enabling you to convert problem I/O-bound applications into easily resolvable compute-bound challenges. Developed to drive faster time to results, IME delivers game-changing latency reduction, more bandwidth and unmatched IOPS.



Parallel Filesystem Solutions

DDN's file system solutions delivers best-in-class analytics, parallel file system and NAS for the most data-intensive and performance-demanding environments. Next-generation Appliances tightly integrate award-winning DDN HPC storage technology with the power of parallel file systems to provide flexible choices for data protection and availability, offering ease of access through traditional NFS or CIFS as well as the option for high performance client access.



Block Storage

To perform cutting-edge workflows and analytics, our highly versatile SFA Platforms deliver award-winning technology with the necessary breakthrough performance and capacity with NVMe, SSD and intelligent disk tiering. Maximizing their innovative PCIe fabric plus the option to leverage the power of embedded processors, applications and file systems within the storage array to significantly reduce complexity, latency and data center footprint. From the performance focused SFA 200NVX and 400NVX all flash NVMe systems, to the versatile hybrid SFA7990X and the ultimate in performance and capacity with the SFA18KX, DDN has the form factor to fit the uniqueness of your use case.

About DDN[®]

DataDirect Networks (DDN) is the world's leading big data storage supplier to data-intensive, global organizations. DDN has designed, developed, deployed, and optimized systems, software, and solutions that enable enterprises, service providers, research facilities, and government agencies to generate more value and to accelerate time to insight from their data and information, on premise and in the cloud.

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