

DDN[®] STORAGE

SOLUTION BRIEF

ACCELERATE LIFE SCIENCES WORKFLOWS



LIFE SCIENCES



SAS Institute uses DDN SFA[®] storage as the backend data repository for their software as a service practice in life sciences.



The Center for Pediatric Genomic Medicine at Children's Mercy, Kansas City, uses DDN to deliver 26-hour intake-to-diagnosis for pediatric patients with genetic disorders.



Wellcome Trust Sanger relies on DDN SFA storage for their ingest and analytics platform as well as their research distribution platform.



University of New South Wales Lowy Cancer Research Centre counts on DDN for ingest and analysis Core Facility Lightsheet Microscopy data for more than 400 researchers.



HudsonAlpha utilizes DDN technology to improve the speed and cost of whole genome sequencing for personalized medicine applications.



New York Genome Center uses DDN to support the data generation and research access for 16 HiSeqXs.



DKFZ leverages DDN to improve actionable mutation validation to more than 50%.

Massive increases in instrument data are revolutionizing life sciences research across a number of fields including personalized medicine, agritech, epidemiology, and drug development. As the amount of data pouring in from sequencers, microscopes, and other high-data-rate instruments moves from gigabytes to terabytes per device, data repositories need to grow easily, ingest and deliver data faster, and facilitate more research community collaboration.

DDN IS RAPIDLY BECOMING THE STORAGE SOLUTION OF CHOICE ACROSS LIFE SCIENCES

As the primary storage in more than one-third of the world's major sequencing and microscopy centers, and with a strong and growing user base in pharma, crop sciences, and epidemiological modeling, DDN technical experts are working in the latest scientific workflows on a daily basis with our customers who are:

- Racing to cure cancer
- Saving lives with personalized medicine
- Protecting populations from infectious diseases
- Supporting sustainable food production
- Illuminating fundamental biological systems

TRADITIONAL STORAGE IS FAILING AS LIFE SCIENCES DATA GROWS

Traditional scale-out NAS and other older storage architectures were built for the capture and analysis requirements of five to ten years ago, and are falling behind. Network protocol bottlenecks, fixed performance-to-capacity, and dependence on high-overhead internode communications means data ingest and access performance can slow to a trickle, even in the face of standard activities like tiering data, background integrity checking, and file system lookups. Under adverse conditions, like a drive rebuild, performance loss can be so extreme that up to 50% more hardware is needed to ensure minimum ingest and access requirements are met.

DDN SOLUTIONS BALANCE PERFORMANCE, SCALE, AND COST-EFFECTIVENESS ACROSS THE DATA LIFECYCLE

DDN storage solutions for life sciences scale up and out so you control performance, capacity, and density. Seamless tiering to object storage gives you simple, cost-effective, active archive; multi-site data sharing; cloud collaboration; and disaster protection. Parallel clients deliver massive bandwidth at any scale, while advanced caching and unique protection capabilities ensure maximum performance, even during outage conditions.

A GLOBALLY INSTALLED BASE WITH ALL MAJOR INSTRUMENT VENDORS AND SOFTWARE SOLUTIONS



STAR
Accelrys
OpenEye
Schrodinger
AMBER
NAMD
CHARMM
Gaussian
GAMESS

R
BWA
Bowtie
GATK
Galaxy
ALLPATHS
Velvet
HMMER
BLAST



AND MANY MORE...

POPULAR DDN SOLUTIONS FOR RESEARCH AND COMMERCIAL LIFE SCIENCES APPLICATIONS



GRIDScaler® EXAScaler®

DDN GRIDScaler and EXAScaler are turn-key parallel file system appliances that are simple to size, install, and administer – ideal for high performance environments who want the benefit of parallel file system performance with the simplicity of NAS. DDN's industry leading experience with parallel file systems means DDN Scaler appliances deliver enterprise reliability, flexible configuration options, and maximum performance. Unique to DDN, these appliances federate POSIX and NoFS object storage protocols, so your users can manage data across file and object from a single point of management for worldwide collaboration and distribution.



WOS®

DDN's hyperscale object storage platform, WOS, addresses both the massive scalability requirements of Big Data and the need to provide secure cloud collaboration, file sharing, and content distribution to your users. WOS is the only pure object storage platform from the API to the disk. The elimination of a file system layer makes WOS faster and more scalable than other object storage systems, and lets you use much more of the disk you buy for your data, rather than file system overhead, for significant TCO benefits.



Flashscale™

Flashscale is the at-scale, enterprise-ready flash storage infrastructure platform that will simultaneously modernize both your workflows and datacenter. Flashscale delivers up to 60 GB/s of bandwidth, 6M IOPS in just 4U with lower latency, higher density, and higher scalability than competing solutions to deliver greater business agility and enable a much wider breadth of application and multi-step workflow support for your scientists, developers, and line of business owners.

ABOUT DDN®

DataDirect Networks (DDN) is the world's leading big data storage supplier to data-intensive, global organizations. For more than 15 years, DDN has designed, developed, deployed, and optimized systems, software, and solutions that enable enterprises, service providers, universities, and government agencies to generate more value and to accelerate time to insight from their data and information, on premise and in the cloud. Organizations leverage the power of DDN technology and the deep technical expertise of its team to capture, store, process, analyze, collaborate, and distribute data, information, and content at largest scale in the most efficient, reliable, and cost-effective manner. DDN customers include many of the world's leading financial services firms and banks, healthcare and life science organizations, manufacturing and energy companies, government and research facilities, and web and cloud service providers. For more information, visit our website www.ddn.com or call 1-800-837-2298.