

INDUSTRY SOLUTION BRIEF

ACCELERATE ISR WITH DDN BIG DATA STORAGE



A Large U.S. ISR Program consolidated all in-theatre ingest on DDN WOS Object storage for fast, effective information delivery to warfighters for high-profile target eliminations, mission planning and review.



A Large Surveillance Program is capturing, processing, and reviewing full motion video in a DDN SFA storage repository which is over 10 Petabytes in size.



A Lawful Intercept Program relies on DDN SFA for ingest, analytics and active archive to achieve its multi-year mission.



A Government Agency Specializing in Infectious Disease Informatics leverages DDN WOS to share pathogen information across a secure, private national network, and archive it for tracking and reanalysis.



BIG DATA: A PROBLEM AND A VIRTUE

High Performance, Big Data Applications are pervasive across US Federal Government workflows, and increasingly they face similar challenges. In High Performance government applications like Intelligence, Surveillance and Reconnaissance (ISR), Lawful Intercept (LI) and large Healthcare initiatives, there is an increasing need for platform-independent, web-enabled, data-centric services that deliver uncompromising availability, security and reliability at massive scale. To deliver on their missions, these workflows need to:

- · Ingest massive amounts of data reliably
- · Reach better decisions faster by analyzing more data in less time
- Store data and analysis for longer periods of time
- Share data with a more diverse local, remote intra and inter-agency team members for collaboration and dissemination.

THE BIGGEST, FASTEST DATA WINS

When everything you need to come to better decisions faster depends on the quantity of data that needs to be captured and analyzed, then the infrastructure that gets you that data the fastest, and delivers it reliably, cost effectively in an architecture that scales for years to come is the winner.

THE ANSWER MIGHT SURPRISE YOU

DDN storage solutions power over 2/3 of the world's fastest supercomputers, and are widely deployed in top Commercial HPC sites across Cloud, Analytics, Manufacturing, Energy, Genomics, Pharmaceutical, Financial Services and more.

THE RIGHT EXTERNAL STORAGE APPROACH

DDN has been working with Federal programs in the US and allied countries for over 15 years supporting some of the most in the demanding intelligence and healthcare applications. The industry's fastest and most scalable block, file and object storage work together to deliver end-to-end data access and management on a single platform. DDN scale out and scale up storage solutions for ingest, processing and analytics, cloud and active archive start at 80 Terabytes (TB) and scale to 10's of Petabytes and > 100 Billion objects.

Large ISR programs require real-time ingest and analysis of massive amounts of multi-format data from multiple sources. DDN's unmatched performance, density and availability deliver ISR programs fast, efficient and reliable multi-sensor data access with the high availability to ensure all data is captured.

LI Initiatives need to handle a wide variety of data sizes, speeds and access methods. DDN's High Performance in mixed IO workloads deliver lawful intercept initiatives reliable capture, high-speed data access and single view, automated data tiering.

Broad-scale health-care programs increasingly incorporate high performance, big data components like sequencing that are also ingest and analysis intensive. DDN's best-of-breed single platform for life sciences workflow delivers healthcare the shortest time to discover and results. In healthcare, re-sequencing genome data is time-consuming and expensive.

The need for secure cloud solutions for collaboration and cost-effective, long-term data storage is common across all of these disciplines. DDN's powerful private and hybrid cloud solutions and active archive nodes are built on DDN WOS object storage for massive, cost-effective scaling.

DDN STORAGE AND SOLUTIONS

DDN delivers the world's premiere storage and solutions to meet the high performance workflow demands of intelligence, surveillance and reconnaissance, lawful intercept and large healthcare initiatives. Our end-to-end systems are designed to solve big data challenges and deliver significantly better efficiency, reliability and return on investment through application acceleration, block, file, and object storage platforms. Proven at scale across a broad range of markets and applications, we can help you architect a solution best suited for your unique requirements.



PLATFORMS

SFA is the fastest, densest and most scalable Block storage array in the world. It uses highly parallelized storage processing technology to deliver unprecedented IOPS and massive throughput. Combined with Enterprise-Level data protection and management, SFA systems deliver over 1 TB/s and support 100s of Petabytes of storage capacity behind a file system to solve all your big data challenges.



FILE SYSTEMS

DDN GRIDScaler, EXAScaler and MEDIAScaler 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. Storage & Systems Architects & Engineers design and deliver systems on time and budget.



OBJECT STORAGE

DDN's hyperscale Object Storage platform, Web Object Scaler *(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.



BURST BUFFER, I/O & APPLICATION ACCELERATOR

Infinite Memory Engine (IME) removes I/O bottlenecks and achieve bottom line results faster. IME is a new I/O provisioning paradigm; an application-aware, fast data tier of nonvolatile memory that resides between compute and the parallel file system and delivers new abilities to accelerate applications and reduce hardware. Proven at scale in some of the world's most demanding environments, IME offloads I/O from compute, alleviates POSIX locking contentions and effectively divorces I/O performance from storage capacity.

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.

