![ddn logo]

The Next Generation Parallel Filesystem Solution

Global Data Platform

Scales Effortlessly

Fastest

Densest

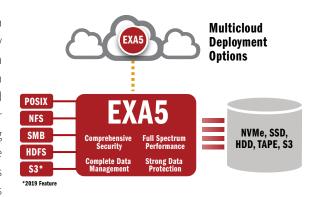**Flexible Architecture**

Most Experience

EXA5 Product Family

Artificial Intelligence (AI), Analytics and High-Performance Computing (HPC) enable organizations everywhere to gain insights from their data with unprecedented velocity and accuracy. Data-intensive workflows put storage infrastructure squarely in the critical path—driving requirements for extreme, dependable performance that scales easily to meet evolving workload requirements on premise and in the cloud.

EXA5: The World's Most Advanced Lustre Solution

Developed and optimized using the latest advances in filesystem software technology, EXA5 delivers extreme performance, scalability, capability, reliability and simplicity. Augmented with feature-rich enhancements, EXA5 delivers a true global data platform capable of enabling and accelerating a wide-range of data-intensive workflows, at any scale. Fully-integrated DDN EXAScaler appliances combine the world's fastest hyperconverged data storage platform with a truly parallel filesystem software in a package that's easy to deploy, managed and backed by the leaders in data at scale.

EXA5 is fully-optimized to deliver data with high-throughput, low-latency and massive concurrency using a shared parallel architecture that can scale flexibly for most technical and economic benefits. Building on over a decade of experience deploying parallel filesystem solutions in the most demanding environments around the world, DDN delivers unparalleled performance, capability and flexibility for users looking to manage and gain insights from massive amounts of data.

Data Management: Automated, Optimized, and Secure

EXA5 introduces several new data management and integrity filesystem features developed by DDN and only available in its appliances. Stratagem is a powerful data orchestration engine that gives users comprehensive data residency controls using policy-based placement. Hot Pools intelligently moves data between high-performance flash and large capacity disk and ensures efficient use of storage. A native T10DIF implementation ensures that data is handled with full integrity from application to disk. Several dozen other new features in EXA5 deliver unique value for users looking to deploy the most demanding workloads on premise, in the cloud.

EXA5 enables organizations everywhere to create, analyze and keep more data than ever before, and accelerates time-to-insight with unequalled speed, precision and simplicity.

Delivering Features and Functionality You Can't Get Anywhere Else

Embedded / Converged: More simplicity, best performance, lower TCO with a fully integrated DDN EXA5 appliance.

Installation / Configuration Tools: Simplify the move to Lustre with data migration, installation, and configuration tools.

Enterprise Features: Seamless deployment and scaling, high availability configurations, quota management, data security and governance controls, data management (backup, archive, migration, replication, synchronization), logging and reporting.

End-to-End Data Integrity: T10PI/DIX implementation transparently secures data from application to the disk drives.

Gateway Nodes: Fully integrated and optimized servers for NFS, SMB and S3 protocols. Scalable, HA configurations.

Comprehensive Management: DDN Insight configuration and monitoring solution simplifies management.

Single Name Space: Single application and end user view of data, regardless of where the data is actually stored.

Stratagem: At-scale data management and orchestration engine, with policy-based data residency controls.

Hot Pools: Automatic data tiering moves cold data sets from flash to capacity tiers, elevates hot data sets.

Comprehensive Quotas: Extended user, project and directory quota controls and reporting.

Data on Metadata: Improved small file performance, increased responsiveness, optimal resource efficiency.

Peak Client Performance: Highest throughput and IOPS performance and lower latency for all IO sizes.

Workload Monitoring: Node and job-level filesystem IO analytics via intuitive GUI for easy optimization.

Backup and Archive: Integrates with DDN DataFlow for reliable and scalable multicloud data management workflows.

Data Migration and Synchronization: Turnkey at-scale data management solutions and services from DDN.

Containerized Workloads: Container-native client provides true parallel data access for containerized applications.

NVIDIA Approved: Scalable reference architectures for DGX-1, DGX-2 and POD optimized and validated with NVIDIA.

Deep GPU Integration: Comprehensive GPU RDMA capability using NVIDIA GPUDirect technology.

AI and DL Optimized: Fully interoperable with common Deep Learning frameworks and GPU computing appliances.

Public and Hybrid Cloud Options: Available for Amazon Web Services, Google Cloud.

Technical Specifications

	ES200NVX®	ES400NVX®	ES7990X®	ES18KX®
Protocols	EXAScaler Parallel Clients, NFS/SMB and S3 Gateways			
Lustre	DDN EXA5, based on Lustre 2.12			
Performance	Up to 90GB/s per appliance (with ES18KX)			
Storage Configuration	Supports embedded metadata servers on DDN SFA Appliances, or external scale-out metadata server using Lustre DNE			
Host Connectivity	EDR/HDR InfiniBand and 40/100GbE (number of connections varies by appliance)			

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.

Product Specifications Subject to Change

v3 (4/20)