

GRIDScaler File Storage System

Scalable, Intelligent File Storage

DataDirect Networks (DDN) GRIDScaler File Storage System combines simple, scalable data management tools with DDN's innovative Extreme Storage platforms to eliminate performance bottlenecks, enhance data integrity and availability, and simplify your environment. The GRIDScaler system enables S2A Extreme Storage to scale bandwidth from 2GB/s to 200GB/s, always perform at full speed, deliver the highest quality of service with intelligent failure avoidance, all while easily growing in capacity from terabytes to multiple petabytes in one volume. Simply and easily scale your environment with optimized GRIDScaler configurations sized for the S2A9900, S2A9700 and S2A6620 performance and capacity optimized SAN storage systems.

The GRIDScaler system supports a wide variety of network protocols to serve LAN, SAN and NAS clients, including NFS and CIFS. The system very easily scales to connect thousands of clients to one scalable file system. Advanced data protection and replication features are built in, with DDN SATAssure data integrity protection and DirectRAID 6 to ensure data integrity and high availability. With GRIDScaler – both high performance and high capacity applications share a common set of files and storage, enabling you to deploy fewer systems and reduce costs. You can achieve further cost reductions and greater ROI with GRIDScaler by saving valuable floor space with industry-leading S2A storage density, lowering power consumption with D-MAID energy savings technology, and by optimizing storage budgets using GRIDScaler intelligent multi-tier storage.

GRIDScaler File Storage System is well suited for many applications ranging from Supercomputing to Animation, Web Services and market data analysis. With scalable data and metadata technology, the GRIDScaler platform is optimized to meet a variety of application workloads and serves as a storage foundation for data center workflows and data flows.



The GRIDScaler File Storage System leverages the complete DDN storage product line-up for optimal performance, capacity, density and cost – all within a single namespace for maximum ease-of-use and managability.



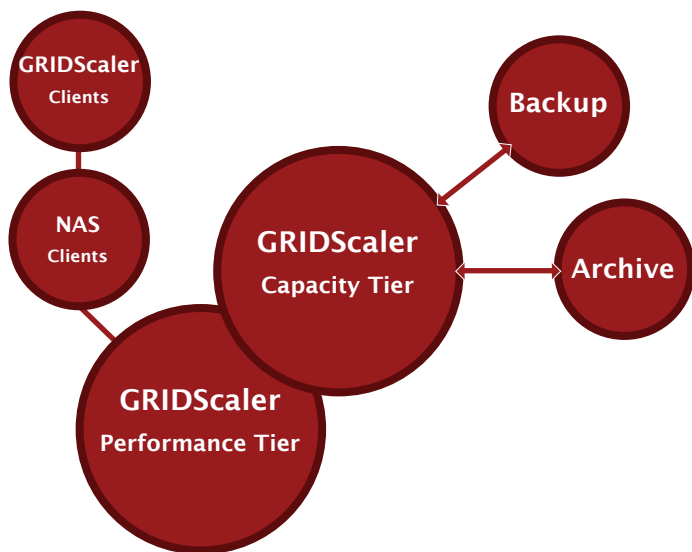
S2A6620
Modular scalable storage with highest density. 120 Drives, up to 120TB, up to 2GB/s



S2A9700
Scalable capacity for large archive tiers. 1200 Drives, up to 1.2PB, up to 3GB/s



S2A9900
The ultimate in scalable Performance and Capacity. 1200 Drives, up to 1.2PB, up to 6GB/s



The GRIDScaler File Storage System is a turn-key solution combining the benefits of the award-winning S2A storage products – S2A6620, S2A9900 and S2A9700 – with a scalable shared file system and optional HSM module.

Features

Client Connectivity Network Protocols	GRIDScaler Linux, NFS, CIFS, HTTP 1/10Gb Ethernet Infiniband Fibre Channel
RDMA I/O	Yes (GRIDScaler Linux only)
Gateway load-balancing	Yes I/O requested granularity
Client-Side Load Balancing	Yes
Client Side Failover	Yes
Concurrent Access	Yes, Fine-Grained File Locking
File & Metadata Mirroring	Yes, Synchronous
Block Size	16K – 4MB
Sub-Block Size	Optional, 1/32 nd of Block Size
Additional Features	Up 32 Snapshots per Volume Storage Tiering Automatic Storage Rebalancing Data & Metadata Replication High Speed Defragmentation
Data Management	Optional HSM Interface (IBM HPSS) Optimized Backup (IBM TSM)

Scalability

GRIDScaler Client Scalability	Over 2,000 Linux Clients
NAS Client Scalability	Over 10,000 Clients
File Servers	2-200 Servers/Cluster
SAN Mode Scalability	2000 SAN Clients
Volume Capacity	Over 2 Petabytes
File Capacity	2 Billion Files/Volume
Clustering	256 Volumes/Cluster
Aggregate Throughput	Over 200GB/s
Linux Client Throughput	1.2GB/s (InfiniBand) 700MB/s (10GbE)
NFS Client Throughput	600MB/s (10GbE)
File Operations per Second	Over 50,000 per Volume

Application Readiness

- Supports high-speed Linux clients and multiple NAS protocols
- Shared namespace across all clients optimizes workflows
- Designed for a mix of workloads and applications to right-size performance
- Simple online capacity growth and data management

True Scalability & Performance

- Independently scale capacity and performance
- Supports over 1000 clients, PBs of capacity and over 200 GB/s throughput
- Deliver single-stream I/O over 1GB/s

Data Protection and Archive

- Replication for DR and Performance
- Policy-based data movement into archival storage
- Supports D-MAID Disk and Tape archives
- SATAssure Data Integrity
- Optimized Backup Support

Learn more at ddn.com/gridscaler.