

DataDirect Networks xStream VTL

High-Performance, Energy Efficient Backup/Recovery Acceleration and Online Archive



High Speed Tape Emulation

- Dramatically accelerate backup and restore processes with transfer speeds over 16GB/s
- No performance degradation during system correction and drive rebuilds
- Parallelized RAID read & write technology to optimize value and performance per drive

Easily Integrated:

- Broad backup application support: Symantec, EMC, IBM, Commvault & more.
- Scales up to 2.4PB in just 2 racks
- Automated tape-disk migration ensures a hands-free process

Energy & Space Efficient

- Store up to 1.2PB per rack
- DDN MAID reduces power draw by up to 50%
- Compression and data de-duplication reduce disk requirements by up to 80-99%

Tape backup and archive systems have historically held many advantages over disk-based approaches to backup & archive with respect to cost, energy efficiency and data center footprint. While the performance and online data availability made possible by disk-based technology has gained appeal in the recent past – it is now possible to achieve the best of both worlds. DataDirect Networks (DDN) has combined VTL technology with its award winning storage technology to deliver superior backup, recovery and archive performance with the economics and benefits of tape.

The DataDirect Networks xStream VTL Storage System is a high-performance backup and recovery solution with broad support for leading data backup utilities. With the xStream VTL you can restore instantaneously and accelerate backups with a complete, easy-to-deploy VTL that works with your current software and processes. This scalable, high-speed device leverages DDN Extreme Storage, capable of delivering industry-leading read and write bandwidth. DDN storage systems are purpose-built to optimally transfer large data files and increase both performance and reliability over traditional tape-based backups and competing VTL offerings.

In addition to the standard high-density, energy efficient storage – capable of holding up to 960TB of usable VTL capacity in a single rack – DDN's xStream VTL is outfitted with energy and space saving technology which enable truly "green" storage, including:

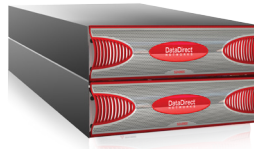
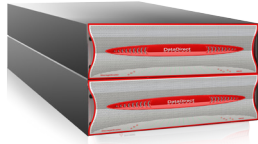
- DDN Dynamic-MAID Technology for Drive Spin-Down – reduces system energy usage by up to 50%
- Data De-Duplication and Compression - ensures maximum capacity efficiency, delivering up to 30:1 data de-duplication and reducing disk storage requirements



"Where bandwidth is king, DDN has royalty in its DNA."

S2A6620**S2A9900****SFA10000**

The xStream VTL System leverages the complete DDN storage product line-up for optimal performance, capacity, density and cost – all within a single scalable system for simple ease-of-use and manageability



Modular scalable storage with highest density
120 Drives in 8U, up to 240TB, up to 2GB/s

Scalable capacity for large archives
Up to 1200 Drives in 2 Racks, up to 2.4PB,
up to 6GB/s

The ultimate in Transactional Performance
1200 Drives in 2 Racks, up to 2.4PB,
10GB/s& 1M IOPS

Features**Benefits**

SATAssure real-time drive error detection and correction

Reduce cost with SATA drives and gain enterprise-class data protection and reliability

Fully redundant architecture and ZERO Degraded Mode

Protect against multiple levels of failure while providing sustained, real-time backup/restore performance

Enterprise reliability

Ensure continued performance and availability against dual-disk failures, silent SATA data corruption, drive rebuilds, and more

De-duplication capacity reduction

Reduce multiple instances of duplicate files across the backup volume to realize massive data reduction; reduce replicated instances, volume capacities and replication traffic by as much as 30 to 1

Multi-ter, multi-site data replication

Enable back-up of multiple copies of files through file replication to virtual and physical tapes both locally and efficiently over IP networks to remote locations

File Replication

Maximize data protection and availability

Specifications

Supported Storage Controllers
performance: per array

SFA10000: 10GB/s Read & Write Peak Performance, Up to 2.4 Petabytes
S2A9900: 6GB/s Read & Write Peak Performance, Up to 2.4 Petabytes
S2A9700: 3GB/s Read & Write Peak Performance, Up to 2.4 Petabytes
S2A6620: 1.5GB/s Read & Write Peak Performance, Up to 2.4 Petabytes

Supported # of VTL Servers

2-8

Supported # of De-Duplication Servers

4+1 (+1 = passive failover node)

Aggregate Usable Storage

30TB –2.4 Petabytes (un-deduplicated)
250 TB De-duplicated (at 30:1 – up to 7.5 Petabytes of de-duplicated data)

RAID Configuration

8+2 High-Speed (SAS & SATA options)

Aggregate VTL Performance

1GB/s – 16GB/s

VTL Interface

8Gb Fibre Channel (4 x VTL Server)
10GbE iSCSI& NDMPv4 (1 x VTL Server)

Compression

HW Accelerated Data Compression
- 700MB/s per card per VTL server

Replication

Asynchronous 1-many / many-1 data replication – accelerated by de-duplication

Automated Tape Migration

Automatic Tape Caching for Backup Acceleration and Zero-Intervention Migration

Clustered De-Duplication

Post-Process De-duplication for Maximum Ingest Speed + Capacity Efficiency

Hosted Backup

Run backup processes directly on the VTL servers for performance & simplicity

Security Features

AES Tape Encryption with Key Management, US DoD Level Tape Shredding

Open Storage Support

Integrates with Symantec NetBackupOpenStorage

Backup SW Support

Broad support for software from Atempo, BakBone, CA BrightStor, Commvault, EMC NetWorker, EMC Retrospect, HP OpenView Storage Data Protector, IBM Tivoli Storage Manager, Symantec Backup Exec, Syncsort, VeritasNetBackup, and more...

Tape Device Support

Broad support for systems from ADIC, ATL, Exabyte, HP, IBM, Overland, Quantum, SpectralLogic, StorageTek, and more.