



# VEXATA VX-100FS FILE STORAGE SYSTEM

## NVMe-based High Performance Enterprise-Grade File Storage

### Unparalleled File I/O Performance at Scale

The VX-100FS unlocks the power of non-volatile memory express (NVMe) to provide enterprise storage for the cognitive era. The VX-100FS offers unparalleled performance across NFS, GPFS, S3, SMB and HDFS, protocols, plus enterprise data services, and unmatched scalability. The VX-100FS is an ideal solution for Machine Learning, AI, IoT, Electronic Design Automation (EDA), HealthCare applications, Media and Entertainment, and enterprise-grade private cloud. Supporting 100's of millions of small and large files, the VX 100FS provides excellent performance for acceleration of unstructured data to support primary business applications, real-time analytics and machine learning. The Vexata VX-100FS is available in multiple configurations optimized to support the performance required by mission-critical transactional and throughput intensive workloads.

The VX-100FS uses a parallel, high availability architecture with active/active controllers and distributed NVMe processing. Supporting NVMe-oF gives IT the flexibility to support existing and emerging workloads. The VX-100FS solution delivers outstanding mixed I/O performance, high ingest throughput with ultra low latency, continuous availability and world-class support at an affordable price point.

### Unlock the Power of NVMe Flash for File Services

The VX-100FS provides linear scalability of performance and capacity. With up to eight File Controller nodes, the VX 100FS File Storage System linearly scales both performance and capacity. The Enterprise

Storage Module's (ESM) each contain four NVMe flash SSDs and the chassis scales from 3 to 16 ESMs for a total system capacity of 64 SSDs per VX-100 chassis. The file system solution scales by matching 8 File Controller nodes to 2 VX-100F chassis for over 100GB/s of throughput, 2M+ IOPS, and up to 1.6PB of effective capacity (with compression).

### Unmatched System Resiliency

For resilient operations, the VX-100FS Clustered File Controller can handle file controller failures without disrupting file operations. It has an active-active design to ensure that an applications access to data is available 99.9999% of the time, ensuring that performance impacts are minimal, and there is no interruption of file operations.

### Enterprise Data Services and Protection

VX-100FS File Storage System implements file level snapshots, clones, file replication, policy-based tiering across storage pools and cloud. File based post process compression allows flexibility. Global namespace can be extended across geographies for collaboration between datacenters.

The VX-100FS uses RAID 5 and RAID 6 data protection, with unparalleled rebuild times on failure compared to conventional all-flash arrays. It provides enterprise-class resiliency, high availability, and non-disruptive upgrades (NDU) of software and hardware. All data at rest is secure with Advanced Encryption Standard (AES) 256-bit encryption, which operates without any performance degradation. Your data is always safe with Vexata.

#### ENTERPRISE SOLUTIONS



VERTICALS

- Machine Learning, Deep Learning and AI
- EDA
- Lifesciences
- Real time Analytics
- IoT, Manufacturing

#### ENTERPRISE FEATURES



PERFORMANCE

- 2M File IOPS
- 100's of Millions of small and large files
- 100GB/s RD, 50GB/s WR
- 60 GB/s MIXED Bandwidth
- Less than 300 us latency



SCALABLE

- Pay as you grow
- Scale-out File Controller
- Scalable Storage Modules
- Scale-out VX- 100 Data Systems



OPERATIONAL SIMPLICITY

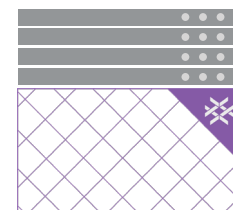
- GUI, CLI, Restful API
- Call Home
- Predictive Analytics



DATA SERVICES

- 2X Efficient Data Protection
- Non-Disruptive Upgrades
- Always ON Encryption
- Post process compression
- File based snaps, clones, replication

↑ ↓ NFS, GPFS, SMB, HDFS, S3 16 X 100GbE



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## System Configurations and Specifications

	VX-100FS ENTRY	VX-100FS BALANCED	VX-100FS PERFORMANCE
MAX. EFFECTIVE CAPACITY *	180 TB (3.8 TB SSDs) 400 TB (8 TB SSDs)	360 TB (3.8 TB SSDs) 800 TB (8 TB SSDs)	720 TB (3.8 TB SSDs) 1.6 PB (8 TB SSDs)
IOPS**	500K IOPS	1M IOPS	2M IOPS
THROUGHPUT**	25GB/s RD; 10GB/s WR 25 GB/s Mixed (50/50)	50 GB/s RD; 20 GB/s WR 50 GB/s Mixed (50/50)	100GB/s RD; 40GB/s WR 100 GB/s Mixed (50/50)
LATENCY**	300µs	300µs	300µs
CONTROLLER NODES	2	4	8
STORAGE NODES	1 VX-100F with 8 ESMs	1 VX-100F with 16 ESMs	2 VX100F's with 16 ESMs each
ACCESS PROTOCOLS	NFS, GPFS, CIFS/SMB, S3, HDFS		
CONNECTIVITY	8* 100GbE	16* 100GbE	32* 100GbE
MANAGEMENT	Web UI, CLI, and RESTful API		
RESILIENCE	Active-Active High Availability Design, RAID 5 or RAID 6, Hot Swappable ESM blades, Non-Disruptive Rolling Upgrades for ESM and IOC Modules, Non-Disruptive Capacity and Performance Upgrades		
DATA SERVICES	Thin Provisioning, Space Efficient Snaps and Clones, Pattern Removal, Post-process Compression, File-based Replication Always-on Encryption With no Performance Impact		

\*2:1 compression

\*\* Measured under load using multiple test cases

### ABOUT VEXATA:

Founded on the premise that every business is challenged to deliver cognitive, data-intensive applications, Vexata delivers 10X performance AND efficiency improvements at a fraction of the cost of existing all-flash storage solutions. Learn more at [www.vexata.com](http://www.vexata.com).

\*Scale-out File Controller\* is implemented with industry leading IBM Spectrum Scale