VEXATA VX-100F NVME FLASH STORAGE SYSTEM

Scalable Data Infrastructure for the Modern Enterprise

As enterprises transform to cloud and mobile business models, database platforms are being pushed to support many more users and process higher volumes of complex events in real time, while simultaneously running predictive analytics on very large data sets.

The Vexata VX-100F scalable storage system is based on the Vexata Operating System (VX-OS) and Active Data Architecture. This enterprise-class solid state storage system exceeds the I/O response time and throughput demands of the database and analytics applications at the core of digital business.

Powered by the ground-breaking VX-OS distributed storage operating system and packaged as a dense, modular storage platform, the Vexata VX-100F storage system combines outstanding system performance with enterprise resiliency, data services and pay as you grow scalability.

The VX-100F supports interoperability via 16 ports of 32Gbps Fibre Channel connectivity for simplified deployments. The modular VX-100F chassis can be configured with from 3 to 16 hot-swappable storage blades, called Enterprise Storage Modules (ESMs). Each ESM contains 4 NVMe flash SSDs from leading suppliers, allowing a maximum of 64 SSDs per 6RU chassis.

The VX-100F provides RAID 5 or RAID 6 data protection across ESMs, with unparalleled RAID rebuild times on failure. Administrators can scale-out capacity and throughput by adding ESMs, realizing massive random and sequential R/W throughput with ultra-low latency for both OLTP and analytic workloads.

Enterprise data services include thin provisioning, space-efficient snapshots and clones for copy data management operations. Security is ensured with 256 bit AES encryption that operates without any performance degradation.

ENTERPRISE USE CASES

ENTERPRISE SOLUTIONS

- High Transaction Databases
- Business Intelligence
- Big Data Analytics
- Real-Time Analytics
- Time-Series Databases

ENTERPRISE FEATURES

RESILIENT

- Active-Active Controller HA
- RAID 5/RAID 6 Protection
- No Single Point of Failure
- Non-Disruptive Upgrades

SIMPLE AND SCALABLE

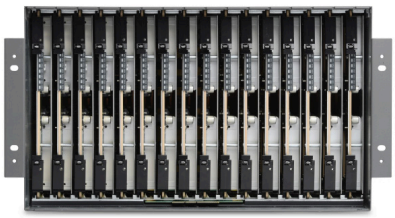
- Scale-Out Architecture
- FC Block Interfaces
- GUI, CLI, Restful API
- Call Home

DATA SERVICES

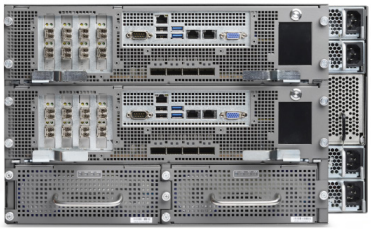
- Thin Provisioning
- Pattern Removal
- Space Efficient Snaps/Clones
- Data at Rest Encryption

VX-100F NVME FLASH STORAGE SYSTEM

FRONT VIEW



REAR VIEW



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Enterprise Class Resiliency and Scaling

The Vexata VX-100F provides enterprise-class resiliency and high availability. Even under impaired conditions, the VX-100F ensures that performance does not degrade. By implementing redundant active-active IO controllers (IOCs), the VX-100F ensures that application access to data is available 99.9999% of the time. Both IOCs provide storage volume services and application data volumes are equally distributed across both IOCs during normal operations. In the case when an IOC is impaired, the second IOC takes over operation within milliseconds of failure detection, ensuring that even during impaired operation, the overall performance impact is minimal.

The VX-100F supports non-disruptive upgrades (NDU) of the VX-OS software distributed across the IOC and all of the ESM data nodes, ensuring that the VX-100F can be upgraded without any disruption to normal operation. The VX-OS on the IOCs can be updated with no impact to data availability. All hardware modules are hot pluggable and field replaceable, minimizing any possibility of downtime. Over time, applications will require higher capacities and performance, the VX-100F allows for seamless scaling of both performance and capacity simply by adding ESM data nodes to the chassis.

This provides a non-disruptive way for customers to scale both capacity and performance of the VX-100F without consuming additional rackspace or needing to buy additional frames.

Compared to incumbent all flash arrays that require new system purchases in order to scale (additional rack space, switches, power, cooling, as well more complexity in cabling), the in-chassis scaling within the Vexata VX-100F is a simple and cost-effective way to implement high performance OLTP and analytics applications at scale.

Vexata VX-100F Scalable Storage System - Technical Specifications

	VX-100F STORAGE SYSTEM
CAPACITY (USABLE)	187.5TB (3.8TB SSDs) using RAID 5
PERFORMANCE	7M IOPS (8KB 70R/30W) @220µS Throughput: 70GB/s (50GB/s R; 20GB/s W) Minimum latency: 80µS Read/50µS Write
PHYSICAL	6RU; 2450W (max); 100Kg
CONNECTIVITY	16 × 32GB/s Fibre Channel
OS SUPPORT	Linux, Solaris, Windows, ESX
MANAGEMENT	GUI, CLI and REST API
RESILIENCE	Active-Active Controller HA, RAID 5 or RAID 6, Hot Swappable ESM blades Hitless, Non-Disruptive Rolling Upgrades for ESM & IOC modules
DATA SERVICE	Thin Provisioning, Space Efficient Snaps and Clones, Data Path Accelerated Encryption

ABOUT VEXATA:
Vexata is the leader in active data management solutions. Vexata's unique breakthrough enterprise offerings enable transformative performance and scale from database and analytics applications. With unparalleled ability to consume the latest in media like NVMe Flash and now with Intel Optane™ SSDs, Vexata systems deploy simply and seamlessly into existing storage environments. Learn more at www.vexata.com

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