

LENOVO|EMC VNX5150 STORAGE ARRAY

OPTIMIZED FOR VIRTUAL APPLICATION PERFORMANCE

ESSENTIALS

- Multi-protocol block level storage with integrated support for Fibre Channel, FCoE, and iSCSI
- FAST Suite ensures **superior performance at the lowest cost**
- Easy storage provisioning from the **#1 provider** of VMware® integration* and the **1st storage platform** to support Microsoft Server 2012 Hyper-V 3.0 environments
- **Administration simplicity** with EMC Unisphere™ Management Suite

Source: Wikibon survey, 2011, 2012, 2013

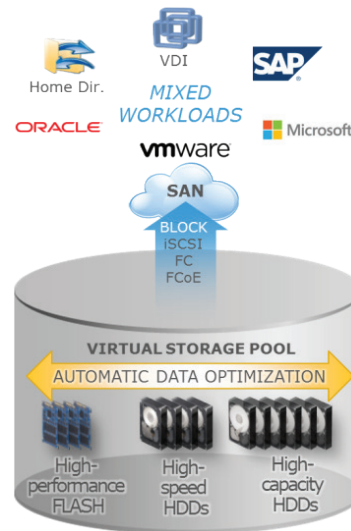
Organizations of every type rely on the timely retrieval of information to facilitate transactions and decision making. While a typical organization is experiencing double-digit data growth, IT budgets, staffing, and traditional storage capabilities are not keeping pace. As a result, IT organizations are under constant pressure to employ more efficient storage strategies and increase the amount of data their staff can manage without additional headcount. Customers are looking to innovative storage solutions to solve these challenges in the same way that server virtualization has enabled them to experience greater efficiency by pooling server resources and dynamically provisioning compute power according to business needs. The storage imperative is not only to move information dynamically according to business activity, but also to make the process fully automated and self-managing.

The Lenovo|EMC VNX5150 storage array delivers industry-leading innovation and enterprise capabilities for block level storage in a scalable, easy-to-use solution. This robust storage platform combines powerful hardware with advanced efficiency, management, and protection software to meet the demanding needs of today's small-medium to enterprise businesses. All of this is available in the affordable VNX5150 storage solution supporting the application requirements of businesses of all shapes and sizes.



VNX5150 - POWERFUL, EFFICIENT, PROTECTED, AND SIMPLE

A robust platform for consolidation of legacy block storage, file servers, and direct-attached application storage, the VNX5150 enables organizations to dynamically grow, share, and cost-effectively manage multi-protocol block storage access. The VNX5150 supports iSCSI, Fibre Channel, and Fibre Channel Over Ethernet access for high-bandwidth and latency-sensitive block applications.

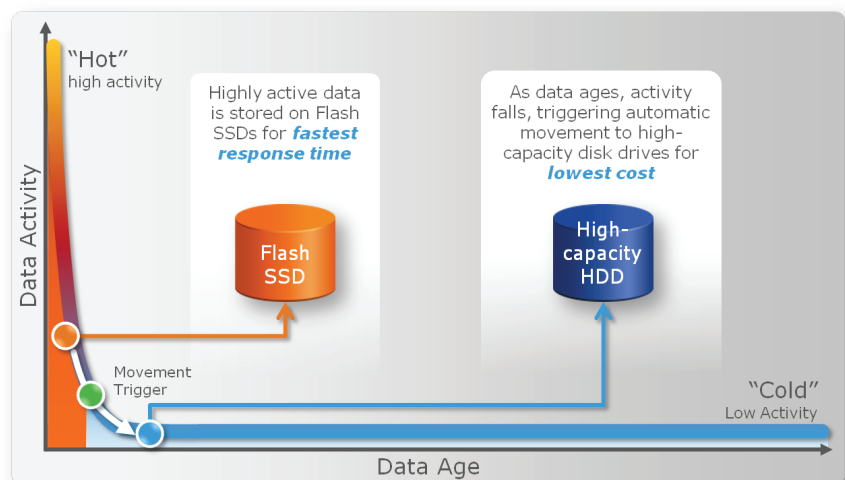


Ideal for mixed workloads, both physical and virtual, the VNX5150 storage platform is powered by Intel hardware with a 6-Gb/s SAS drive back-end to drive high performance, greater efficiency, and robust protection – all with ease.

FAST CACHE BOOSTS VNX5150 PERFORMANCE

Highly active data is served from flash drives with FAST Cache, which dynamically absorbs unpredicted spikes in system workloads. As that data ages and becomes less active over time, FAST VP (Fully Automated Storage Tiering for Virtual Pools) automatically tiers the data from high-performance to high-capacity drives in 1 GB increments, resulting in overall lower costs—regardless of application type or data age.

The VNX5150 addresses the performance requirements of virtualized applications with the FAST Suite by adding SSD Flash drives to the array. This approach allows for consolidation of multiple workloads enabling customers to use storage capacity more efficiently automatically and delivers low \$/GB.



Fast Software automatically tiers data across heterogeneous drives and boosts the most active data to cache ensuring customers receive the optimal benefits of FAST Cache

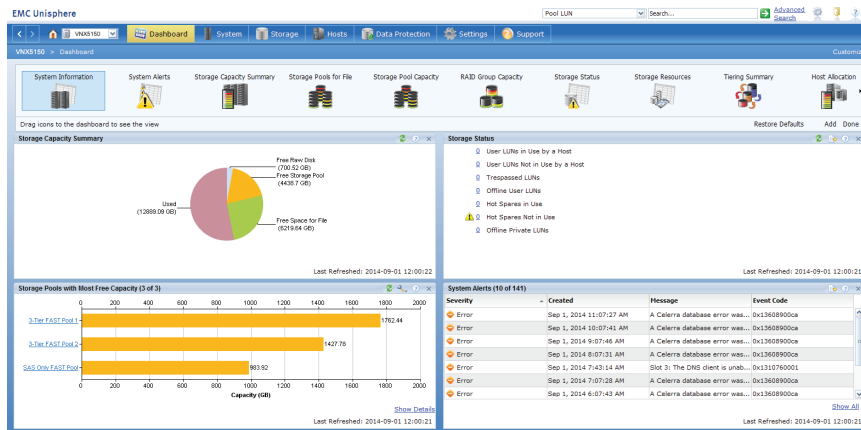
COMPLETE PORTFOLIO OF PROTECTION

EMC® VNX data protection software provides the right protection for every application need:

- **Local Protection:** delivered with snapshots for point-in-time recovery and continuous data protection with Recover Point local replication
- **Remote Protection:** available with the same DVR-like recovery with Recover Point Continuous Remote Replication
- **Application Protection:** to make application consistent replicas controlled by the application, Replication Manager and AppSync™ provide application protection – delivered as a service

MANAGE, MONITOR AND TUNE YOUR VNX5150 STORAGE WITH EASE

EMC Unisphere makes it easy to manage VNX5150 systems from anywhere with a simple, integrated user interface for distributed storage environments. The Unisphere dashboard is a single screen for at-a-glance management and reporting, enabling administrators to gain instant and actionable knowledge about what’s occurring across the entire environment. Unisphere’s single sign-on automatically discovers all VNX5150 systems in the environment for seamless configuration. One of the most significant capabilities of Unisphere is the integrated support ecosystem. The speed-dial-like capability provides users with immediate online access to support tools, best practices, software downloads, live chat support and submitting service requests.



Unisphere Central allows customers to monitor the health, alerts and performance of large numbers of VNX5150 systems along with a central console. Capabilities include an easy-to use customizable dashboard that aggregates system information like capacity, CPU utilization, health, and alerts. Users can see key system performance metrics for each system and can categorize dashboards by host, VMware and Hyper-V VMs as well as by storage types. Users can easily launch Unisphere and access the full suite of management on each VNX5150 system.

VNX Monitoring and Reporting¹ provides basic monitoring and reporting capabilities for VNX5150 customers. VNX Monitoring and Reporting automatically collects block and file storage statistics along with configuration

¹ VNX Monitoring and Reporting Option available towards end of 2014

data, and stores them into a database that can be viewed from dashboards and reports. Statistics include Virtual Provisioning, FAST Cache, and FAST VP. This solution can retrieve information from one or several (up to 10) VNX5150 storage systems. VNX Monitoring and Reporting provides preconfigured reports on storage performance and capacity. Users can change the report configurations and export them into various formats. Easily installed, VNX Monitoring and Reporting can run in physical and virtual environments.

THE INDUSTRY'S MOST EXTENSIVE STORAGE SOFTWARE OFFERINGS

The VNX5150 software ensures customers have all of the necessary capabilities to protect and manage their information. The VNX Total Protection Pack includes replication capabilities, point-in-time recovery features such as snaps and clones combined with automated application copies for assured recovery, along with monitoring and alerting for compliance with protection policies. The VNX Total Value Pack includes all of the protection features plus “set it and forget it” performance optimization. All VNX5150 software is managed through Unisphere.

The VNX5150 software is also available in modular suites:

- **FAST Suite** — Automatically optimize for the highest system performance and the lowest storage cost, simultaneously
- **Security and Compliance Suite** — Keep data safe from changes, deletions, and malicious activity
- **Local Protection Suite** — Practice safe data protection and repurposing
- **Remote Protection Suite** — Protect data against localized failures, outages, and disasters
- **Application Protection Suite** — Automate application copies and prove compliance
- **Unisphere Management Suite** — Monitor and manage multiple VNX systems with full visibility across the virtual stack.

VNX Series Packs		VNX Series Suites	
VNX Total Value Pack	VNX Total Protection Pack	FAST	
		Security & Compliance	
		Local Protection	
		Remote Protection	
		Application Protection	



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