Datrium and Mellanox Record-Breaking Storage Performance for Private Clouds

OVERVIEW

Complexity is the top problem plaguing data centers and the move to private and hybrid clouds. With the high cost and rigidity of traditional storage arrays, the market is looking to converged infrastructures on standard x86 platforms. Open Converged Infrastructure, offers vastly simpler performance, scalability and protection for virtualization and private clouds, enterprise applications, dev/ops, analytics and virtual desktop environments.

A FULLY VALIDATED SOLUTION OPTIMIZED FOR TIER-1 APPLICATION PERFORMANCE

Datrium DVX have a long reputation for being ideally suited for performance-intensive workloads by leveraging local host CPU and flash for the fastest possible read IO, isolated from the applications of other hosts. Datrium DVX with Flash E2E takes write performance to the next level for deployments such as multi-thousand seat VDI, real-time analytics, and IoT. In a recent IOmark benchmark, DVX with Flash E2E shattered the previous record by five times and the highest hyperconverged result by ten times, posting a record-breaking 8,000 IOmark-VMs. System-wide read performance is 200 GB/s bandwidth and 18 million input/output operations per second (IOPS), while system-wide write performance is 8 GB/s for a disk-based data pool and 16 GB/s for Flash E2E.

As a leading global supplier of end-to-end Ethernet solutions, Mellanox is the perfect match for the incredibly high performance Datrium stack. The Mellanox Spectrum switches forward data packets at full line rate from 10GbE to 100GbE, with consistent ultra-low latency and zero packet loss. The Mellanox switches enable a true non-blocking and lossless switching fabric for performance-intensive and latency-sensitive applications. The Mellanox switches also optimize data center efficiency with the right port count, small form factor, low power consumption, and superior cost performance ratio.

By offloading RDMA, VXLAN, and OVS from the CPU and the OS, the Mellanox ConnectX NICs deliver the highest performance and ultra-low latency, while also freeing up the CPU and system resources for upper-layer applications. Coupled with ease of deployment and automated end-to-end network provisioning and management, the industry-leading Mellanox solution offers the most efficient networking for performance-driven server and storage applications, hosted in the most demanding data centers, public and private clouds, as well as HPC systems.

KEY BENEFITS

- Industry-leading storage performance: Class-leading forwarding rate at all packet sizes and extremely low latency

- 5x more performance than All-Flash Arrays (AFA) at less than half the cost per terabyte, and 10x more performance than hyperconverged with built-in cost optimization features for secondary storage

- Cost-effective 10GbE switch with 25/40/100GbE capable ports - future-proofed for data center expansion

- Easy to deploy and pre-tested for compatibility that ensures the solution works out of the box

- Unique port count - Two Mellanox switches fit in a 1RU for high availability

- Simple to deploy, easy to scale, automated management and cloud integration dramatically boosts business profitability

BREAKING OUT OF THE BOX

A combined Datrium-Mellanox solution delivers all-flash performance, simplicity, cloud-like scalability and economics, together with the following advantages:

Based on a distributed scale-out architecture, Datrium natively converges compute, storage and virtualization for all enterprise workloads at any scale. Mellanox Ethernet switch solutions significantly reduce the networking complexity, especially when the IT infrastructure scales and enterprise-class reliability is required.

Reduced infrastructure complexity

The Datrium DVX solution is simple to deploy and even simpler to manage. From the initial power-on to provisioning applications takes just a few minutes. Coupled with Mellanox REST-based management APIs, the Mellanox Ethernet switch solution provides network provisioning and monitoring capabilities that can be easily integrated into existing management software.

Extreme performance and scalability

Designed to leverage the strength of end-to-end Mellanox Ethernet solutions from 10 to 100GbE, Datrium delivers breakthrough performance that dynamically scales workload performance independently from storage capacity.

Simple, flexible deployment options

Simple and scalable networking: It just works when servers are connected to the Mellanox Ethernet switches. With ports configurable from 10 to 100GbE in the smallest and most convenient form factor, Mellanox has the most flexible and scalable product for a broad range of IT infrastructure topologies.
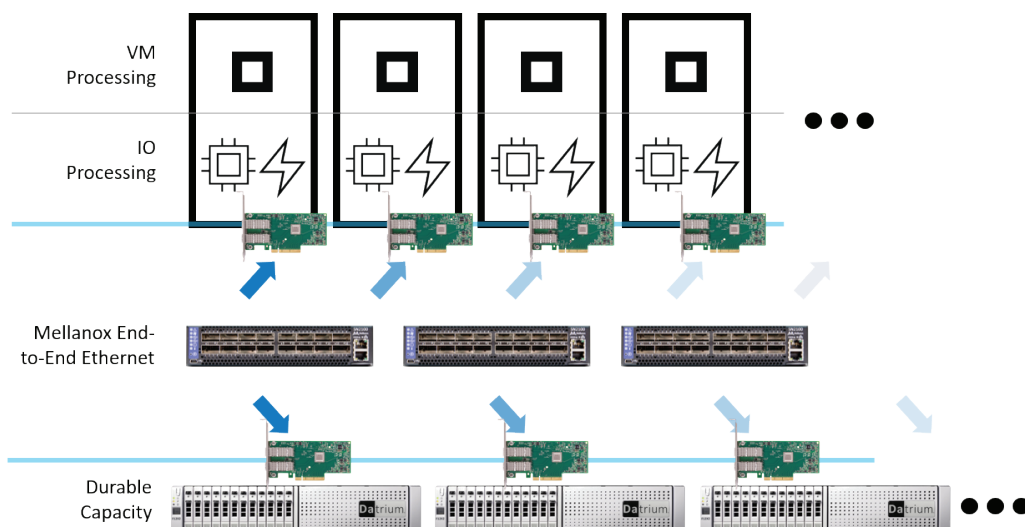

Figure 1. Joint Datrium-Mellanox solution simplifies infrastructure complexity

About Datrium

Datrium is the leader in Open Converged Infrastructure for hybrid clouds, a new breed of converged infrastructure that goes beyond hyperconvergence. Datrium converges compute, primary storage and cloud backup for vastly simpler administration, performance, and protection of hybrid cloud infrastructure. More information is available at www.datrium.com.

About Mellanox

Mellanox Technologies (NASDAQ: MLNX) is a leading supplier of end-to-end

Ethernet and InfiniBand intelligent interconnect solutions and services for servers,storage, and hyper-converged infrastructure. Mellanox intelligent interconnect solutions increase data center efficiency by providing the highest throughput and lowest latency, delivering data faster to applications and unlocking system performance.

Mellanox offers a choice of high performance solutions: network and multi-core processors, network adapters, switches, cables, software and silicon, that accelerate application runtime and maximize business results for a wide range of markets including high performance computing, enterprise data centers, Web 2.0, cloud, storage, network security, AI, telecom and financial services. More information is available at www.mellanox.com.

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