



# WekaIO and Mellanox Redefine Storage Performance on Ethernet

## OVERVIEW

Traditional storage architectures depend on complex technologies such as Fibre Channel to enhance the performance of enterprise applications. But the diverse workloads found in the enterprise today – shared directory structures, metadata-heavy I/O, large and small files, and random and sequential access patterns – require a fundamental shift in the way storage systems are architected to deliver on-demand performance at massive scale.

## A FULLY INTEGRATED SOLUTION OPTIMIZED FOR APPLICATION PERFORMANCE

The WekaIO Matrix™ solution is a distributed, scale-out software based storage solution that provides businesses with High-Performance Computing (HPC) class performance and cloud-like scalability for compute intensive applications and collaboration. Leveraging standard x86 based servers, off-the-shelf SSDs, and Ethernet networking infrastructure, Matrix features a highly-optimized network stack. The result is dynamically scalable performance with sub-200 microsecond latencies over Mellanox network infrastructure.

The end-to-end Mellanox Ethernet solution consists of Spectrum switches, ConnectX network adapter cards and LinkX cables and transceiver modules. The Spectrum switches forward data packets at full line rate from 10G to 100G, with consistent ultra-low latency and zero packet loss. The Mellanox switches enable a true non-blocking, lossless switching fabric for performance-intensive and latency-sensitive applications.

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

## KEY BENEFITS

- Industry-leading file R/W performance and latency reduce time-to-results by 10x or more
- Easy to deploy and pre-tested for compatibility that ensures the solution works out of the box
- Advanced functionality such as DPDK reduces network latency to improve worker productivity
- Simple to deploy, easy to scale, automated management and cloud integration greatly boosts business profitability

*“An integrated solution with WekaIO and Mellanox delivers the performance required by modern applications such as machine learning with microsecond latencies.”*

Liran Zvibel,  
CTO and Co-founder  
WekaIO

## BREAKING OUT OF THE BOX

A combined solution from WekaIO and Mellanox delivers all-flash performance, simplicity, cloud-like scalability and economics by providing the following advantages:

### Extreme performance and dynamic scalability

Designed to leverage the strength of end-to-end Mellanox Ethernet solutions from 10 to 100GbE, Matrix delivers breakthrough performance that dynamically scales up or down to match application requirements. An optimized network software stack based on Data Plane Development Kit (DPDK) technology provides up to a 10x boost in packet processing for extreme performance and high throughput.

### Simple, flexible deployment options

Install Matrix software on your server cluster with Mellanox NICs and guarantee instant compatibility for the highest performance and lowest latency in the industry. Matrix supports hyperconverged, dedicated storage server, or a mixed topology in bare metal, virtualized, or private cloud environments for maximum deployment flexibility.

### Reduced infrastructure complexity

There's no need to deploy, manage, and maintain a separate network based on Fibre Channel to ensure adequate storage performance. The combined solution provides higher aggregate performance and eliminates the need for multiple tiers of storage and multiple network types.

### Cloud scale and economics

Take advantage of Mellanox's scalable platform and WekaIO's Matrix integrated tiering to any S3, Swift, or REST compatible storage for a true scale up and scale out architecture that reduces Capex and Opex. The low cost per port of Ethernet compared to that of Fibre Channel means that more money can be put towards other projects rather than more infrastructure.

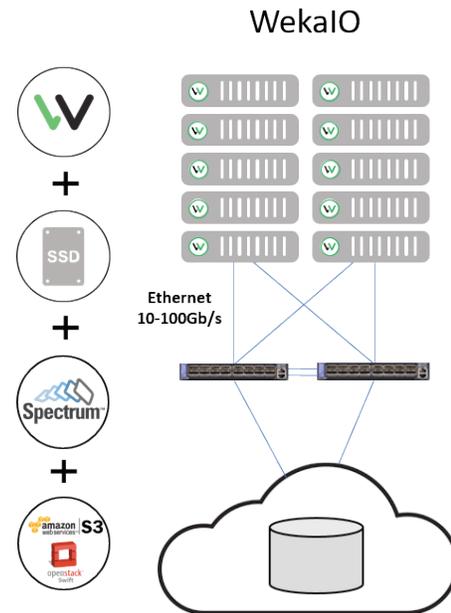


Figure 1. WekaIO and Mellanox Solution

### 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, telecom and financial services. More information is available at [www.mellanox.com](http://www.mellanox.com).



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### About WekaIO

Weka.IO's hardware independent, zero-footprint storage system offers a radically simple way to provision file storage in the datacenter. Our POSIX compliant software based solution delivers extremely high bandwidth and IOPS performance on flash based storage infrastructure. Integrated tiering and a global namespace eliminates data silos and ensures you can share your data with any application in your cloud. We deliver the performance of an all flash array with the convenience of file based storage for maximum infrastructure agility, low TCO and cloud scale economics. For more information, visit [www.weka.io](http://www.weka.io) or follow us on Twitter @WekaIO.