

Solving Today's Biggest Data-Intensive Problems with Sharable NVMe™ Flash Storage



Highlights

- **Breakthrough Economics:** The integration of Weka software with Western Digital hardware enables you to consolidate servers and storage, saving power, cooling and licensing costs
- **Sharable Performance:** Extends the high performance of NVMe™ flash to shared storage that allows up to six hosts to attach without a switch
- **Simple Scalability:** Capacity scales up to 368TB¹ in a 2U unit within a single namespace and performance scales dynamically and independently, allowing the system to adapt to varying workloads

Challenges

- **Increasing Demands:** Increasing application demands are pushing storage infrastructures past the performance capabilities of HDD or SSD storage
- **Management Difficulties:** Legacy storage systems were not designed for modern applications and often result in silos of data that are difficult and costly to manage
- **Skyrocketing Costs:** Increasing amounts of data are driving up OPEX costs related to powering, cooling and managing multiple silos of data storage

Addressing the Combined Challenge of Rapidly Growing Data and Increasing Performance Needs

As enterprises increasingly rely on digitalization, modern applications such as real-time communications, high-end images and streaming videos are driving explosive data growth. In addition, businesses increasingly depend on data warehousing, analytics and online transaction (OLTP) workloads that require consistently high levels of performance and availability. Traditional disk-based storage simply can't meet these increasing performance needs, especially since these environments, workloads and datasets always seem to be increasing in size and importance year after year.

Winning Partnership Delivers a Solution with Extreme Performance and Flexibility

Western Digital is proud to partner with WekaIO™ (Weka), an innovation leader in high-performance, scalable file storage for data-intensive applications. WekaIO's WekaFS software paired with Western Digital storage delivers unparalleled performance, scale and affordability. WekaFS has been architected to allow performance and capacity to transparently scale independently as needed. Performance scales based on the number of CPU cores allocated to WekaFS; cores can be added and removed dynamically to handle peak workload needs such as month-end processing or a complex research project.

Western Digital's OpenFlex Data24 NVMe-oF Storage Platform enables WekaFS environments to thrive by extending the high performance of NVMe flash to shared storage. The OpenFlex Data24 NVMe-oF Storage Platform provides the flexibility to meet varying requirements depending on data workload and performance requirements and is built to deliver screaming performance in WekaFS environments. With low latency and consistently high bandwidth, data is accelerated to the speed of flash and is shareable with up to six hosts without a switch.



OpenFlex Data24 NVMe-oF Storage Platform

Solution

WekaIO's WekaFS™ software converts your existing server clusters into a massively parallel scale-out storage system with linear performance scalability and sub-millisecond latency.

Western Digital's OpenFlex™ Data24 NVMe-oF™ Storage Platform delivers the speed of NVMe SSDs to up to six hosts with a shared storage solution that delivers high-density, extreme performance and improved cost efficiency.

The combined solution will help your business thrive by accelerating performance, simplifying workflows and reducing costs. WekaFS and OpenFlex work together to simplify the storage and management of mission critical data with an all-flash scale-out solution that can meet the TCO requirements of even the strictest environments.

Western Digital Leads the Way with NVMe-oF Technology

Flash technology has revolutionized the performance of storage systems and Western Digital leads the way with NVMe-oF technology that propels flash storage to its full potential. Storage infrastructures built on OpenFlex Data24 benefit your business by providing accelerated performance, improved responsiveness and increased agility, transparently scale independently as needed. Performance scales based on the number of CPU cores allocated to WekaFS; cores can be added and removed dynamically to handle peak workload needs such as month-end processing or a complex research project.

Increase Performance and Lower Costs

OpenFlex Data24 is designed to provide customers with the performance needed to accelerate their business workloads by dramatically speeding up I/O operations. Faster I/O allows each server to handle more transactions, resulting in the CPU spending less time waiting for data. The increased performance provided by all-flash NVMe-oF storage enables higher workload volumes while using fewer CPU resources—resulting in a reduction in the number of servers needed in your data center. Server resource consolidation means cutting capital and operational costs with fewer servers to power, cool, license and maintain.

Ultrastar® DC SN840 NVMe SSDs

At the core of the OpenFlex Data24 NVMe-oF Storage Platform are Western Digital Ultrastar DC SN840 NVMe SSDs. The Ultrastar DC SN840 is a performance NVMe SSD targeting cloud compute and enterprise workloads that require both low latency to data and high availability. The DC SN840 is Western Digital's 3rd generation of performance NVMe SSD for data centers and extends Western Digital's leadership in dual-port architecture by vertically integrating proven flash controllers.



Ultrastar DC SN840 NVMe SSD

Conclusion

Designed for the most demanding, data-intensive technical workloads, the combined solution from WekaIO and Western Digital can dramatically change the economics of high-performance storage. Leveraging powerful NVMe technology, virtualization and cost-effective capacity, the solution delivers incredible performance, efficiency and reliability that can help give your business a competitive edge.

For more information on how WekaIO's WekaFS software paired with Western Digital's OpenFlex Data24 NVMe-oF Storage Platform can turbo-charge your data storage infrastructure and improve business operations, visit westerndigital.com/platforms.

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¹ One GB is equal to one billion bytes and one TB equals 1,000GB (one trillion bytes). Actual user capacity may be less due to operating environment.