

# WekaIO MATRIX™



## UNMATCHED AGILITY AND SCALABILITY

Capacity scales to petabytes within a single namespace, and performance scales dynamically and independently



## BREAKTHROUGH ECONOMICS

Consolidate multiple tiers of storage, saving power, cooling, and rack space



## EASY MANAGEMENT

One admin can easily manage petabytes of data



## GLOBAL NAMESPACE

A single namespace, integrated tiering and patented data protection—data is safe and always accessible.

## FILE STORAGE SOFTWARE FOR YOUR CLOUD

Enterprises struggle with the structural limitations of legacy storage architectures—some applications are I/O and latency sensitive while others require high throughput. These proprietary designs end up compromised, optimized for one specific use case or the other. The resulting collection of dissimilar technologies and siloes of storage adds considerable cost and complexity to the datacenter and makes cloud deployment a challenge. WekaIO Matrix is a shared accelerated storage solution that began with a clean slate and a radical goal—simplify storage without compromising on performance, scalability, or ease of management. For today's virtualized cloud environments, this requires a complete departure from legacy file structures and hard disk based architectures.

WekaIO's Matrix software based scale-out storage solution is optimized to leverage the performance of flash technology to support both large and small file access, either randomly or sequentially. It can be deployed as part of a dedicated storage server (appliance model) or as virtualized file storage with compute and storage integrated into the application cluster, eliminating data center cost and complexity.

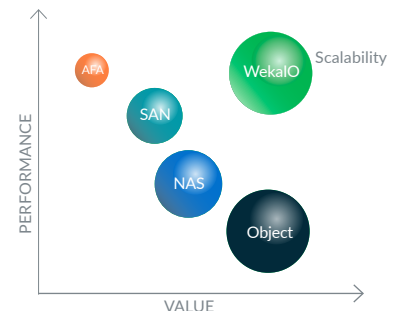
The WekaIO Matrix file system, MatrixFS, is ideally suited for performance intensive workloads such as Web 2.0 application serving, financial modeling, life sciences research, media rendering, Big Data analytics, log management and government or university research.

## ELASTIC PERFORMANCE SCALING

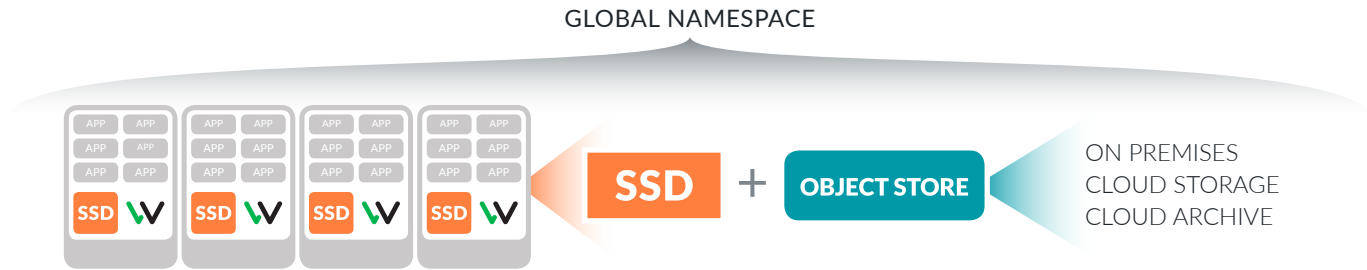
Predictable and seamless performance scaling is a challenge with traditional NAS filers and parallel file systems, resulting in poor utilization of expensive compute resources. With the WekaIO Matrix software, performance is defined by you, not by what the appliance can deliver. The software is integrated into the compute cluster and each WekaIO core delivers 30,000 I/O's per second and over 400MB per second throughput—all at less than 300 microseconds of latency. A cluster of 100 cores will deliver 3 million IOPS and 40GB of bandwidth to the application.

## INFINITE CAPACITY AND ADVANCED DATA PROTECTION

WekaIO eliminates the storage siloes and underutilized capacity that frequently results from multiple disparate storage platforms by creating a distributed, single namespace file system capable of scaling to thousands of compute nodes and petabytes of storage. Administrators and users have instant access to and complete visibility of the corporate-wide data set managed by MatrixFS. Our patented data protection scheme distributes data across the entire file system ensuring the highest level of protection for your data. A cluster can survive up to four concurrent failures without loss of service.



## HOW IT WORKS



## USE CASES

- Web 2.0** • Cloud-hosted services, web applications, and content sharing
- Big Data Analytics** • Fraud detection, retail optimization, call center analytics, and IoT data analytics
- Life Sciences** • NGS, bioimaging, structural biology, informatics
- Media and Entertainment** • Nonlinear editing, VFX rendering, transcoding, and content delivery
- Financial Services** • High frequency trading, risk management, and market simulation
- Academic/Government** • Climate change simulation, computational physics, earthquake, space research, intelligence

SPECIFICATIONS	
Software	Matrix™ V3.0
Architecture	Intel x86 standard server
Minimum Cluster Size	6 Servers (Minimum failure domain)
Max. Cluster Size	Unlimited scale
Cores Per Server (min/max)	Xeon or higher processor (min. 1, max. 7)
System Memory	Minimum 10GB per Matrix enabled core
Maximum Number of File Systems	64,000
Storage	Enterprise class SSD – SATA, SAS, PCIe or NVMe
Minimum Number of SSDs	6 (1 SSD per failure domain)
Management Interface	GUI, CLI, REST API
Deployment Method	VM (KVM, ESXi, XEN), Bare metal process, AWS instance
Deployment Models	Hyper-converged for best performance or dedicated storage appliance
Average Latency (4K block)	< 300 μsecs
Max. IOPS per Core (4K Random Reads)	> 30,000 IOPS, linear scalability per core
Max. Throughput per Core	> 400MB per second, linear scalability per core
Supported Protocols	NFS, HDFS, connectivity to Object and CIFS/SMB via external server
Supported Network Types	10GbE or higher
Data Protection	Distributed data protection (N+2 or N+4)
Supported Operating Systems	Linux – RHEL 6.5 or later, CentOS 6.6,6.7,6.8, Ubuntu 14.0.4, SUSE 11.4
Cloud Tiering	S3, Swift, REST, public or private cloud
Certified Object Stores	Amazon, HGST, Cleversafe



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