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 natively in the cloud with compute and storage integrated into the application cluster or as a dedicated storage server (appliance model), 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, engineering development, financial modeling, life sciences research, media rendering, Big Data analytics 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 over 30,000 I/O's per second and over 400MB per second throughput—all at less than 500 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

GLOBAL NAMESPACE

SSD + OBJECT STORE

ON PREMISES
CLOUD STORAGE
CLOUD ARCHIVE
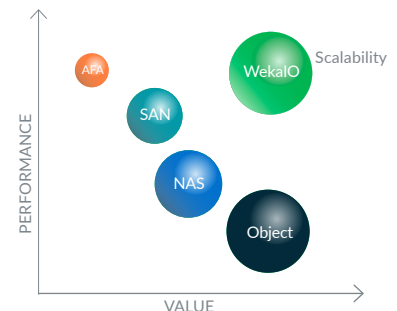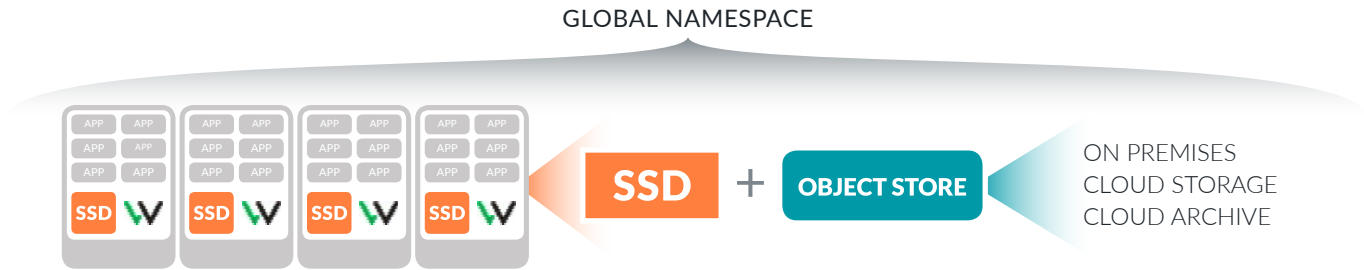
USE CASES

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

Manufacturing • EDA simulation and verification, software builds, CFD, thermal imaging

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
Cluster Size	6 Servers (minimum failure domain) to 1,000's in a single cluster
Data Protection	Distributed data protection (N+2 or N+4)
Supported Protocols	POSIX, NFS, SMB, HDFS
Maximum Number of File Systems	Architectural limit 64,000 (current tested limit 1,024)
Storage Types	Enterprise class SSD — SATA, SAS, NVMe
Deployment Methods	VM (KVM, ESXi, XEN), Bare metal process, AWS instance
Management Interface	GUI, CLI, REST API
Snapshots and Clones	File and file system level, up to 1024 snapshots
Deployment Models	Hyperconverged (private cloud or AWS instance), dedicated storage appliance
Error Detection	End-to-end data protection
System Monitoring	Cloud based monitoring and analytics for application tuning
Alerts	Configurable to Email, SMS, Slack
Access Control	Multi-factor authentication
Supported Network Types	10GbE or higher
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

WEKA.IO

2001 Gateway Place, Suite 400W, San Jose, CA 95110 USA   T 408.335.0085   E info@weka.io   www.weka.io

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