Supermicro Reference Architecture

FEATURES

PRECONFIGURED AND FULLY TESTED
Best-in-class components engineered to work together

EASY TO MANAGE
Simple, intuitive management via GUI, API, or CLI

INTEGRATED STORAGE TIERING
Tier to multiple S3 or NFS targets for infinite capacity scaling and lowest cost

INDUSTRY LEADING PERFORMANCE
World's fastest file system with native NVMe supports CPU and GPU workloads

EXASCALE CAPACITY
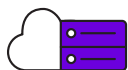Scale to petabytes of NVMe and exabytes of Object storage

UNIFIED ACCESS
POSIX compliant with support for NFS and SMB

ADVANCED DATA PROTECTION
Distributed data protection and end-to-end data integrity

TRANSPARENT SNAPSHOT CAPABILITY
Integrated backup and disaster recovery

HYBRID CLOUD INTEGRATION
Backup or burst to the cloud for near unlimited resources

BREAKTHROUGH ECONOMICS
High rack density and low power and cooling consumption
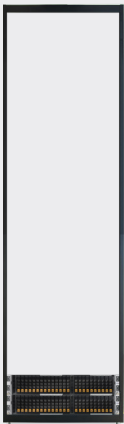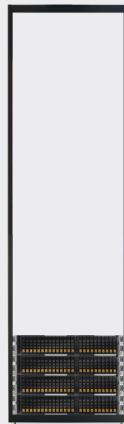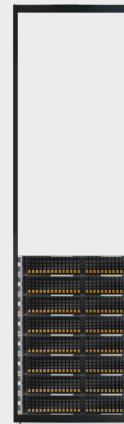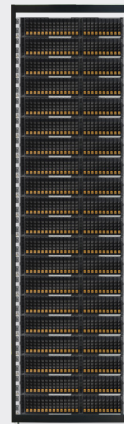
WekaIO WekaFS™

WekaIO's WekaFS is the world's fastest and most scalable file system, ideal for today's data-intensive applications in artificial intelligence (AI) and technical computing. It has proven scalable performance, delivering over 6x more performance than blade-based all flash scale-out NAS and 2x more than locally attached NVMe SSDs.

WekaFS uses a clean-sheet design with an optimized network stack that runs Ethernet (10Gbit and above) or InfiniBand, so data locality is no longer a necessary factor for performance. The software presents a POSIX file system that distributes both data and metadata across the entire storage cluster to ensure massively parallel access. Using NVMe flash technology ensures the highest performance and lowest latency.

AN ENGINEERED SOLUTION

Based on WekaIO's File System software, Supermicro's BigTwin™ server, and Mellanox's network adapters, the engineered solution provides industry- leading performance and value. The BigTwin™ is the first and only 2U multi-node system supporting the highest performance processor, memory, storage, I/O and an incredible 30% better thermal capacity. Mellanox ConnectX-4 adapters provide the choice of either Infiniband or Ethernet to deliver 100Gb/s bandwidth in a single port, the lowest available latency, 150 million messages per second and application hardware offloads, satisfying even the most demanding application requirements.

For more information, contact us at Info@Weka.IO.

WekaIO ENGINEERED SOLUTIONS	2 SERVERS	4 SERVERS	8 SERVERS	20 SERVERS
• HIGHEST PERFORMANCE • LOWEST LATENCY • MASSIVELY SCALABLE • SPACE AND ENERGY EFFICIENT • FULLY PRECONFIGURED				
Supermicro Servers	2*	4	8	20
Total Rack Space	4U	8U	16U	40U
Storage Nodes (4 per server)	8	16	32	80
SSDs per Node	6	6	6	6
SSD Count	48	96	192	480
Raw Capacity** (TB)	184	368	737	1,843
Usable Capacity** (TB)	98	252	524	1,310
IOPS Performance (millions)	2.5M	5M	10M	25M
Bandwidth (GB/sec)	37.5	75	150	375

* - Minimum configuration   ** - Rounded to nearest number with N+2 data protection

Storage Server Configuration (4-Nodes Per Server)

COMPONENTS	SPECIFICATIONS	QUANTITY
Supermicro BigTwin™ Storage Enclosure	SYS-2029BT-HNR	1
CPU(s)	Intel® Xeon® Gold 6126 2.6GHz	8
RAM	16GB DDR4	48
Networking	Mellanox ConnectX-5 or later 100Gbit/s VPI Dual Port PCIe	4
SSD(s)	Micron 9200 Pro 3.84TB U.2*	24
Boot Drive	480GB or larger M.2 SATA	4
Supermicro I/O Module	AOC-MHIBE-M1CG	4
Support	Gold – 4 Hour Response Time	

* - SSD capacity options include 1.92TB and 7.68TB

Configuration details subject to change without notice. Please contact WekaIO for custom configuration details.

WEKA

SUPERMICRO

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