



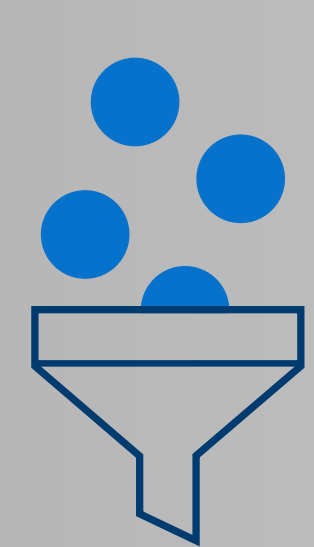
Aligning Storage Architectures with AI Workloads

Overcoming AI storage challenges with scalable, high-performance solutions

From bottlenecks to breakthroughs, each AI storage challenge has a corresponding solution designed to maximize performance and efficiency.

Challenges in AI storage

AI workflows are transforming industries, but they also bring unique storage challenges.



Small file bottlenecks

Billions of small objects create I/O contention and limit throughput



Metadata Overhead

Metadata operations add latency and slow AI pipelines



Cost vs. Performance

Capacity storage is affordable but slow; performance storage is fast but costly

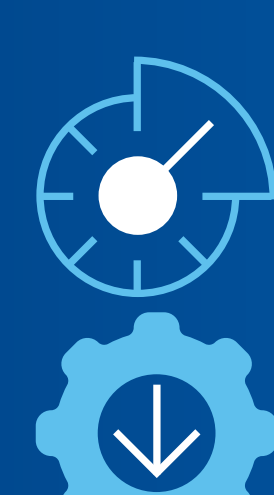
AI-ready storage solutions

These architectures are designed to tackle these obstacles, ensuring AI workflows remain efficient, scalable, and high-performing.



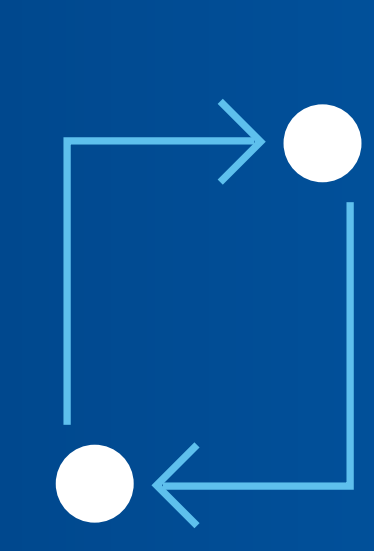
Disaggregated architectures

Scale compute and storage independently to reduce bottlenecks



RDMA acceleration

Lower latency and improve data movement efficiency



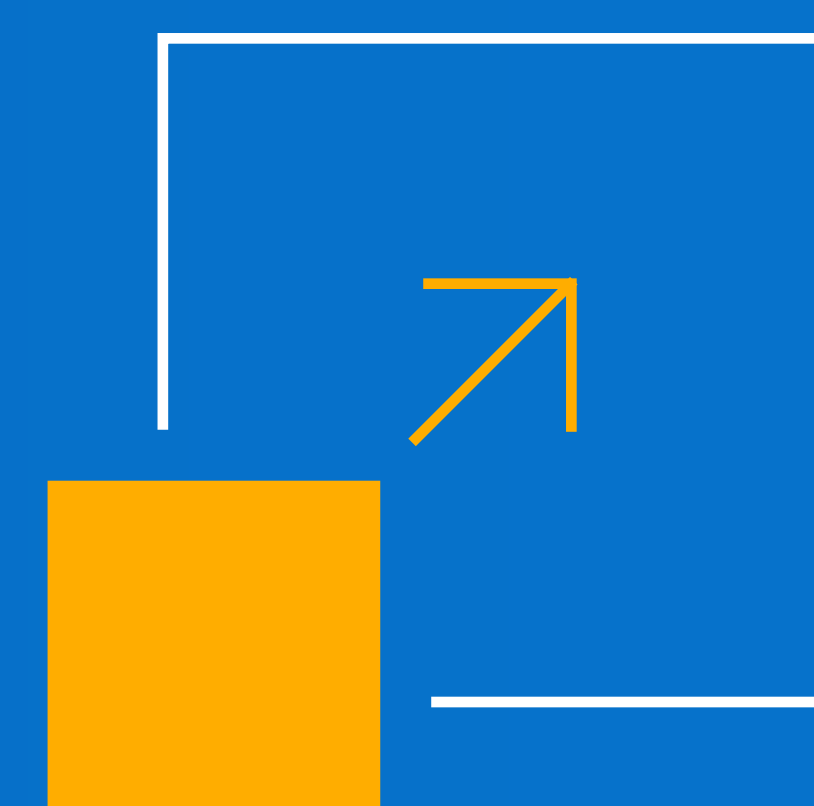
Data lakehouse architectures

Combine flexible data storage with structured, high-performance access

Case Study: Scaling AI Storage Without Disruption

An IT team faced challenges with siloed analytics workloads and limited scalability for future AI initiatives.

- Adopted disaggregated object storage with RDMA acceleration
- Achieved high throughput and reduced latency
- Built a scalable architecture without costly overhauls



Supermicro: Powering AI workflows

Purpose-built storage platforms designed for scalable, high-performance AI infrastructure

Supermicro + AMD

	Traditional Storage	Modern Object Storage	Key Capabilities
Scalability	Limited	Infinite Scalability	Petascale storage platforms
Latency	High	Low latency	Predictable, linear scaling
Performance	Inconsistent	High throughput	AMD EYPC™ CPUs
Cost	Expensive	Cost-efficient	
Flexibility	Rigid	Adaptable to diverse workflows	

Unlock the full potential of AI

AI workflows demand storage systems that can keep up with their speed, scale, and complexity. Modern object storage is the key to unlocking AI's transformative potential.

Click [here](#) to read the full white paper.

