FlashBlade//EXA: The Future of AI and HPC Storage Performance

A visionary company can leverage a strong core technology for many purposes. Consider the graphics processing unit (GPU), invented over 25 years ago, or Internet Protocol, developed over decades, and expected to continue advancing for many more. Both absorbed many other technologies, simplifying and unifying disparate technologies and practices.

Pure Storage leverages its core Purity technology in the same way for artificial intelligence (AI) with today's introduction of FlashBlade//EXA™. FlashBlade//EXA is designed specifically for the challenges of today's largest AI workloads, enabling the independent scaling and management of data and metadata through a platform that offers extreme performance, scalability, and adaptability while maintaining the simplicity and consistency Pure Storage is known for.

Our core technology includes DirectFlash®, enabling Pure Storage to directly manage flash NAND technology natively (rather than having flash "pretend" to be a hard disk), significantly improving price, performance, and reliability. And, our scale-out Purity operating system, built on our key-value-store core technology, provides extremely high-concurrency and low-contention access to data of all formats, which is especially critical to modern high-performance workloads.

A great technology also allows a leading company to quickly adjust to incorporate new requirements, yet stay consistent with its core software and value set. Built on the same principle (and technology) as our hyperscaler design, DirectFlash and Purity are now coming together in new ways to allow Pure Storage to deliver the world's highest-performance storage system for large-scale AI/ML and high-performance computing (HPC).

Introducing FlashBlade//EXA: The Ultimate in AI and HPC Scalability and Performance

FlashBlade//EXA is a purpose-built, advanced data storage platform designed to support the most demanding AI and HPC workloads, enabling AI natives, specialized GPU clouds, the most advanced AI enterprises, and tech titans to stay competitive in the race for AI innovation. It leverages the powerful Purity engine to drive unheard-of data read/write speeds and file name space. For customers that want to choose their own environment, it provides a disaggregated architecture

but preserves the reliability, scalability, simplicity, and performance that Pure Storage is known for. Here are just a few of the superlatives that we are delivering with FlashBlade//EXA:

Extreme Performance

FlashBlade//EXA will deliver 10+TB/s read speed and write speed performance as high as 50% of read at GA this summer. (No caching utilized; we're talking sustained performance!)

Performance Density

FlashBlade//EXA will deliver industry-leading extreme performance in a fraction of the space, delivering 3.4TB/s per rack at GA this summer.

Unmatched Scale

FlashBlade//EXA combines unmatched namespace and capacity scaling, supporting trillions of files and exabytes of capacity at GA this summer.

Improved Adaptability

FlashBlade//EXA will allow customers the flexibility to choose their own qualified data nodes and seamlessly and predictably scale read/write performance, as well as metadata IOPS and capacity.

Multidimensional Performance

FlashBlade//EXA delivers the extreme metadata performance required for multi-modal data access.

Vision for the Future

Pure Storage invests 20% of revenue in R&D—an investment above and beyond every other storage vendor in the market, and we are committed to keeping FlashBlade//EXA as the AI and HPC performance champion in the future. Our Purity operating environment, built on a scalable key-value store and DirectFlash technology, has proven its superiority over individual purpose-built software to adapt to any storage environment while maintaining reliability and simplicity. It just works—beautifully.

The future of AI and HPC is about more than just processing power; it's about flexibility, speed, and scale. FlashBlade//EXA's disaggregated architecture enables organizations to consistently stay up to date with the latest in hardware

innovation, and our large R&D investment (over 20% of revenue) allows FlashBlade//EXA to stay up to date in the latest software advancements.

Read the white paper: FlashBlade//EXA: Storage Architecture for Modern AI and HPC Workloads

The Pure Storage Advantage

Pure Storage leads the industry in reliability, simplicity and consistency of operation, non-disruptive hardware and software upgrades, and longevity. This past year alone, Pure Storage has delivered an industry-shaking design win at a top four hyperscaler, the world's highest-density 150TB DirectFlash module, and Pure Fusion™ v2, which fundamentally transforms enterprise data silos into integrated enterprise data clouds.

FlashBlade//EXA is a reflection not only of our innovation engine but our ability to innovate **rapidly** while staying true to our promise of simplicity, consistency, performance, and efficiency. It sets a new standard for AI and HPC data storage performance, scalability, and adaptability. With FlashBlade//EXA, Pure Storage is ready to help you take your AI initiatives to the next level and future-proof your infrastructure for years to come.