

Nominee: X-IO

Nomination title: X-IO Hyper-ISE

- **What are your product's / solution's key distinguishing features and/or USP?**

Many organisations are exploring all-flash-arrays in order to solve their storage performance challenges. Whilst Flash is undoubtedly a useful tool solve some latency and I/O bottlenecks, it is very expensive and also comes with its own particular nuances, challenges and issues. The key to solving any challenge is to look to a mix of past and present toolsets and in the case of storage performance, it makes total sense to fuse the best of hard disk drives with the best of flash storage.

X-IO's Hyper-ISE is the only true Hybrid storage system to fuse Solid State Flash Drives (SSD) and Hard Disk Drives (HDD) as a single pool of storage, creating the ideal balance of price, performance, and capacity. Hyper-ISE uses patented Continuous Adaptive Data Placement (CADP) software to analyse the behaviour of application I/O and place hotspot data onto SSD in real time if measurable performance gains will be achieved. If not, data is kept on lower-cost HDD, ensuring SSDs are fully optimised and available for performance-driven data. By creating the perfect partnership between SSD and HDD, it can match or even outperform all-flash systems at 25% of the cost.

Furthermore, due to the truly unique "zero-touch" design of the Intelligent Storage Element (ISE) hardware and software, the Hyper-ISE has an unrivalled 7 year duty cycle backed by an inclusive 5 year warranty. Through the use of patented self-healing technology costly and performance detrimental disk replacement is not needed in the event of a physical defect, instead true uninterrupted service can be provided at extremely high performance levels over its lifecycle.

Hyper-ISE Unique Features:

- Continuous Adaptive Data Placement (CADP) technology continuously manages placement of data between SSD and HDD devices in real time.
- Provides true split-second active-active failover for high availability.
- Cost-effective high performance for random workloads, transactions, queries, analytics and reporting (such as VDI, OLAP and OLTP).
- Solves core issue for high performance cloud storage by providing predictability in performance and cost.
- Low TCO with zero-touch maintenance and free 5-year hardware warranty.

Key features:

- Reduces database query times by up to 20x.
- Extends consolidation benefits of server virtualisation, achieving 50:1 virtual-to-physical ratios.
- Maintains high performance levels by only using enterprise-class SAS HDD and SSDs.

- SSD resources are never wasted, performance is never compromised, and capacity is always cost effective.
- Delivers 2x to 10x performance of traditional storage solutions for high performance applications.
- Lower power requirements and higher reliability than pure Flash arrays.
- Capital cost is a fraction of all-flash arrays in the marketplace.

What tangible impact has your product/solution had on the market and your customers?

Impact on Market

Data warehousing and business intelligence operations are unlocking the value from data at ever-increasing rates, but are hindered by limited storage performance. The performance demands for virtual desktop and other high performance requiring applications are so high that storage equipment can comprise 50% or more of the initial solution cost.

Hyper ISE provides customers with unmatched value in price/performance for the most demanding applications. It enables businesses to do cloud computing, get 3x the number of users on the environment, increase revenue, run database reports that complete in 1/10th the time, move gigabytes of data constantly through the data warehouse, or support thousands of VDI sessions.

Impact on customers

Specialist SaaS provider RTW Hosting started testing Hyper ISE product after rapid growth in demand for its private cloud services led to a performance degradation in its existing storage estate. The Hyper ISE delivered 180,000 IOPS - a 2,471% performance increase over the previous configuration's 7,000 IOPS - while using five times less space and power.

"We're seeing 25 times the IOPS we got with our previous SAN, with extremely low latency, VM deployment is around 15-20 times quicker, and our storage is perfectly placed to easily handle IOPS storms and ensure the end user doesn't see any performance degradation," says Mike Wills, CEO and founder, RTW Hosting.

"Before X-IO, our VMWare template took between four and six hours to provision; now it takes five minutes. Our customers are already commenting that they've noticed a performance difference, which is critical because we differentiate ourselves through the provision of premium performance, 24x7. X-IO units have delivered phenomenal performance at an extremely competitive price."

RTW has acquired over \$1m worth of Hyper ISE product. The investment will also enable the company to offer an enhanced live hosting/ Infrastructure as a Service (IaaS) environment to its customers.

Major differentiators

High Performance Storage at unrivaled price / performance levels

- Hyper ISE achieves up to 300,000 IOPS in a single 3U 14.4 TB system and provides an ideal balance of price, performance, capacity, and reliability. It is designed specifically for applications that require enterprise-class reliability, low-latency and high performance.
- Hyper ISE enables 100% capacity utilisation without the performance issues of traditional systems which typically hit a performance wall when utilisation reaches 50-70% of storage capacity.
- IT staff do not need to manage storage as data workloads change throughout the days, weeks, and years, as the unique CADP software continuously manages hot data for ongoing performance improvements.

The Only 5-Year Warranty in Storage

- Hyper ISE is backed by a no cost, 5-year hardware warranty. X-IO is the only storage company willing to stand by its reliability claim.

Fast Forever

- Hyper ISE provides high performance throughout the complete lifecycle due to the way it handles vibration, heat dissipation, data placement and drive reliability. Disk drives within Hyper ISE are treated as a large, self-healing drive and work congruently, resulting in higher performance and reliability.
- Price, performance, capacity, and reliability are linked; Hyper ISE was designed to provide an ideal balance of all four over time and through its entire lifecycle.
- Hyper ISE delivers SSD performance with HDD economics by analysing application I/O workloads, in near real-time, to accelerate hot data with SSD performance.

Why nominee should win

- Hyper ISE has a low TCO with zero-touch maintenance and free 5-year hardware warranty.
- Hyper ISE outperforms systems up to four times more expensive by creating the perfect partnership between SSD and HDD.
- Significantly improves database application performance, enabling customers to avoid huge infrastructure investments.
- Provides performance and cost predictability for high performance cloud storage.
- Extends consolidation benefits of server virtualisation, achieving up to 50:1 virtual-to-physical ratios.