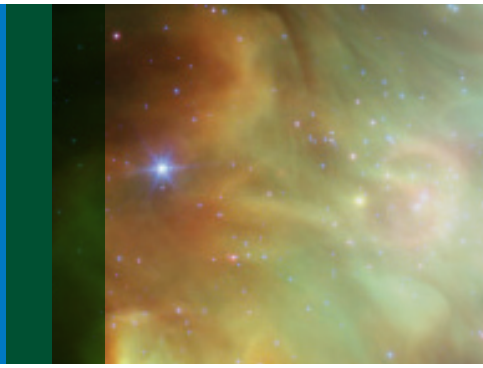
Top 10 Reasons Why the SGI® InfiniteStorage™ 5000 Series Delivers the Best Storage Solution for UV and ICE

The SGI® InfiniteStorage™ 5000 series (IS5000) RAID platform combines leading-edge hardware with a choice of host interfaces and drive technologies. This field-proven storage platform offers customers a highly modular, flexible and cost-effective path to consolidated storage. It delivers linear scalability and proven reliability combined with high IOPS and throughput.



The SGI IS5000 series perfectly complements the SGI UV and SGI ICE server families. Here are the top 10 reasons why it is the most popular storage system for HPC environments with over 715,000 systems sold.

1. Unparalleled Performance

High-performance computing (HPC) environments use staggering amounts of data that can cripple most storage systems and break traditional architectures. As data volumes continue to mushroom, the cost and ability to keep a system up and running at a consistently high level has superseded raw performance as the critical need. The IS5000 product family is built for capacity-intensive, high-performance environments—supporting both high-performance file systems (Lustre, CXFS, GPFS, FHFS, etc.) and bandwidth-intensive streaming applications. Typically requiring fewer drives to support a given application, the platform delivers unparalleled performance per drive and cost per gigabyte. The IS5000 series has also earned a reputation for battle-hardened reliability.

2. Battle-Hardened Reliability

Part of this reputation for reliability is due to the fact that the IS5000 series is one of the most proven and widely deployed HPC storage systems in the industry. Interoperability with switches (including a wide range of fibre channel switches) host bus adaptors and other IO components have been thoroughly tested across thousands of customer deployments. Various OSs, including numerous variants of Windows® and Linux®, have also been tested natively.

3. Superior Drive Quality

SGI spends an enormous amount of time and effort qualifying drives to weed out any that are not truly enterprise class. This greatly contributes to the overall reliability of the IS5000 series.

4. Dramatically Shortened Drive Rebuild Times

With often thousands of drives supporting HPC, failures are inevitable, and rebuild times for today's large-capacity drives can range from 18 hours for an idle system to multiple days or a week for an active system. A key feature available exclusively in the IS5000 family is Dynamic Disk Pools (DDP). An optional alternative to traditional RAID, DDP ensures reliability and performance when the inevitable hard disk failure occurs. DDP administers dynamic reconstructions of failed drives, providing customers with the ability to restore a storage system to optimal conditions following a drive failure 10 times faster than with traditional RAID architectures. DDP also reduces the impact on the performance customers experience during the restore of a failed drive by nearly 60%. Plus, hot-swappable capabilities allow you to proactively replace questionable drives without impacting overall system performance or risking data loss. This enhanced data protection technology enables customers to maintain business continuity and reduce overall storage system costs.

5. Modularity to Start Small, Grow Big

Compared to monolithic systems, the highly modular IS5000 series storage architecture allows you to appropriately size a DAS or SAN deployment for your organization's needs. Deploy anything from an entry-level system with few drives up to an environment that can support top-tier HPC—without overprovisioning. This allows you to start small and scale to multiple petabytes of unified storage according to business demands.

6. Maximized Cost Efficiency with Hybrid Arrays

You can also cost-effectively mix and match different types of drives—including HDD and SSD. This enables a hybrid solution that will deliver significantly better performance with lower cost and lower powered infrastructure than competitors' offerings. You can select nearline-SAS drives where access to data is infrequent, or choose enterprise SAS drives for their high performance suited to more demanding applications. Or, deploy more expensive SSD with intensely fast IOPS performance for latency-sensitive applications.

7. Modular Approach to Software

With its next-generation array management software, the IS5000 series is an ideal primary or secondary tier storage solution for tiered virtualization implementations. Unlike one-size-fits-all approaches, the modular SGI software architecture allows you to pre-select the exact capabilities without having to pay for expensive features that are not needed. Choose the mix of features to best meet your data management requirements.

8. Ease of Use and Installation

Deploying a RAID storage system typically requires you to define a fixed set of known disk drives, and once deployed the system is fairly rigid, making it a complex task to add drives. SGI Dynamic Disk Pools (DDP) is a new technology available exclusively on the IS5000 series that addresses the problems of increased capacity of drives in large conventional RAID environments. DDP is available as an optional alternative to standard RAID. DDP avoids the pitfalls of conventional RAID by distributing data, protection information, and spare capacity across a pool of drives. It eliminates complex RAID management by treating the entire storage system as one volume, making individual storage elements transparent to the administrator. To increase capacity, you simply map more volume, and DDP adds it to your pool automatically. This dramatically simplifies management, with no idle spares to manage and no reconfiguring of RAID when expanding. In addition, the ability to add capacity in single-drive increments lowers capital expense.

9. Health Monitoring with AutoSupport™

A new AutoSupport feature in the IS5000 series further ensures improved service and uptime. It essentially sends health information about the drive to the SGI worldwide support organization. For security, this sharing includes only metadata of key metrics and system information. The support organization uses this information to feed back actionable suggestions to the customer to ensure optimal system health and uptime, enhanced storage and operational efficiency, and an overall improved support experience.

10. Leadership in High Performance Computing

As the recognized leader in High Performance Computing (HPC), SGI offers the right storage system to meet your organization's demanding performance and capacity requirements. SGI's fleet of solutions and system engineers, have tremendous experience sizing and designing server and storage needs for HPC use cases. For further references, see SGI's abundant reference customer list.

About SGI

SGI, the trusted leader in high performance computing (HPC), is focused on helping customers solve their most demanding business and technology challenges by delivering technical computing, Big Data analytics, cloud computing, and petascale storage solutions that accelerate time to discovery, innovation, and profitability.

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