sgi®

SGI® InfiniteStorage NAS Solutions

SGI® InfiniteStorage NAS 2000, SGI® InfiniteStorage NAS 3000 and SGI® InfiniteStorage NAS Gateway High-Performance Fully Integrated Network-Attached Storage (NAS)

Features
- Extreme performance and capacity
- Online performance and capacity upgrades
- Seamless transition to heterogeneous SAN
- Industry-leading price/performance
- High reliability and availability
- Network load balancing, data lifecycle management, and data protection options

High-Performance Network-Attached Storage Solution
SGI InfiniteStorage NAS solutions provide high-performance network-attached storage (NAS) services for the most demanding engineering and commercial environments. Consolidating critical data for efficient management, they deliver universal data access for heterogeneous environments without sacrificing performance. Available in a wide range of configurations, SGI® NAS solutions easily connect to an Ethernet network to serve UNIX®, Windows®, and Apple® clients.

Scalable Capacity and Performance
Unlike other market offerings, SGI NAS solutions have virtually unlimited scalability in all NAS dimensions (performance, connectivity and capacity) without forklift upgrades. Based on the scalable and high-bandwidth NUMAflex™ architecture which provides virtually unlimited capacity—SGI NAS solutions scale from 1TB to 400TB without sacrificing performance. NUMAflex, combined with the industry's highest performance and scalable filesystem—XFS®—allows SGI NAS solutions to deliver both bandwidth and transaction performance, making them ideal for applications interacting with large data sets. SGI NAS solutions make it easy to centralize, manage, and grow data on a central file server with a single filesystem, scaling progressively to meet your expanding data needs over time.

Flexible, Open Configurations Protect Investment Over Time
SGI NAS solutions provide the flexibility to support your evolving business requirements. Transparent integration into UNIX, Windows, and Apple environments ensures your information will be centrally available to network users. Moreover, SGI NAS solutions upgrade seamlessly to an SGI® InfiniteStorage SAN Server and make a robust NAS / SAN gateway for even greater performance while eliminating redundant SAN and NAS storage pools.

Unmatched openness means that SGI SAN and NAS solutions can be deployed with any major vendor's systems and a selection of SGI and non-SGI storage to accommodate changing computing and storage requirements over time. Available in several configurations—entry, midrange, power—the NAS 2000, NAS 3000 and NAS Gateway can be further augmented with options for network load balancing, data lifecycle management, and data protection.

High Reliability and Availability
SGI InfiniteStorage NAS solutions leverage hardware designed from the ground up with high availability in mind. Features such as redundant power supplies, cooling fans, and RAID protection ensure your valuable data will be safe. Options for high availability application clustering, snap shot, data lifecycle management and world record performance backup and restore build on this solid foundation, allowing customization and control of availability, accessibility and retention.

SGI® InfiniteStorage NAS Solutions

Low Total Cost of Ownership

Along with delivering world-class performance, SGI NAS solutions are designed with simplicity and growth in mind. They provide a flexible, centralized storage pool that is easy to monitor, manage, secure, and grow and their modular architecture allows users to dynamically add more storage and users without running the risk of costly downtime and expensive "trade-in" upgrades. The SAN upgrade option turns SGI NAS solutions into a powerful NAS/SAN gateway, allowing you to centrally manage a single shared pool of data simultaneously accessible by networked clients or heterogeneous SAN clients—delivering ultimate flexibility and the best of both NAS and SAN architectures.

SGI InfiniteStorage NAS solutions are fast, scalable, flexible, and secure data management solutions that simplify the sharing and management of your valuable data assets, reducing overall storage costs.

Data Manager	Entry	Midrange	Power	Altix
• Capacity (TB Min/Max)	0/168	0/392	0/504	0/504
• CPU	2	4	8	2/16
• System memory (GB)	2/6	4/8	8/16	4/32
• Maximum number of Gig E	2/6	2/8	2/8	4/32
• Maximum number of 2 or 4Gb Fibre Channel ports	8	16	32	8/32

Hot-swappable redundant power supplies

Capacity per Storage Module
- 2044GB with 14x146GB 10,000 RPM Fibre Channel drives
- 3500GB with 14x250GB 7,200 RPM SATA drives [1]
- 4200GB with 14x300GB 10,000 RPM Fibre Channel drives
- 5600GB with 14x400GB 7,200 RPM SATA drives

NAS 2000
- 2Gb Fibre Channel RAID, redundant dual/active controllers and Fibre Channel connections, SNIA Conformance Test Program (CTP) certified
- Cache 512MB per controller/128MB data
- RAID 5: default 6+1 for RAID 5 group (up to 29+1 supported)
- Maximum Bandwidth per Storage module is 400MB/s

NAS 3000
- 2 or 4Gb Fibre Channel RAID, redundant dual/active controllers and Fibre Channel connections, SNIA Conformance Test Program (CTP) certified
  – Eight 400MB/sec (maximum) Fibre Channel logical connections
  – 1.024GB cache per controller
- Maximum Bandwidth per Storage module is 1600MB/s

Software
Storage Management Software
- XFS high-performance 64-bit journaled filesystem; maximum file size—9 million terabytes (or the system drive limits); maximum filesystem size—18 million terabytes (or the system drive limits)

- XVM Volume Manager: virtualization technology to organize logical data structures for high performance and ease of management
- NFS V2/V3 (UNIX clients file serving)
- CIFS (Windows client serving)
- TCP
- Performance monitoring and user interface
- Dynamic capacity and volume expansion
- Performance monitoring
- Nondisruptive upgrades

Options
High Availability
- SGI InfiniteStorage NAS solutions with FailSafe® high-availability software, redundant data manager (cluster configuration)
- SGI InfiniteStorage NAS solutions with SGI XVM SnapShot incremental backup technology
- SGI InfiniteStorage NAS solutions with XVM mirrors high-bandwidth mirroring software
- Embedded Support Partner 7x24 proactive system monitoring and automatic rule-based failure notification to SGI support personnel

Networking Software
- Network Load Balancing Software (NLBS)
- Bulk Data Service (BDSpro™)

Shared Filesystem for SAN
- CXFS™ heterogeneous shared filesystem for storage area networks; eliminates the need for replicating data across a SAN by allowing multiple heterogeneous systems to share one scalable filesystem

Backup Option
- Automated tape libraries with capacity range of 2–42TB update
- Hourly backup data rates ranging from108GB/hr to 648GB/hr
- Includes data protection application software tailored to library/drive combinations

Data Lifecycle Management Option
- Automated tape libraries with capacity range of 15–31TB
- Pre-configured Serial ATA arrays with capacity range of 3 to over 500TB
- Average access to first byte of data stored on tape is 18–23 sec
- Includes SGI® Data Migration Facility, Tape Management Facility, and OpenVault™

On-Site Implementation for Entry, Midrange, and Power Configurations
- Includes on-site system implementation to maximize system performance and accelerate productivity; services include site-planning assistance, hardware installation, configuration of network connectivity, and software configuration
- On-Site implementation not included in SGI InfiniteStorage Gateway

Support and Warranty
- Warranty: one-year on-site hardware repair and parts replacement with next-business-day response time
- 7x24 support coverage available
- The SGI industry-leading electronic support tool suite is available at no additional cost to Warranty, SGI® FullCare™, and SGI® FullExpress™ customers

Dimensions
Data Managers
- Entry (2U): 3.44" H, 27" D, 17.06" W (8.74 cm H, 68.58 cm D, 43.33 cm W); 44.5 lb (20.23 kg)
- Midrange and power (4U): 6.88" H, 27" D, 17.06" W (17.48 cm H, 68.58 cm D, 43.33 cm W); 89 lb (20.23 kg)

Storage Module
- Height (3U) 5.25", 133 mm
- Width 19.0", 482 mm
- Depth 22.6", 576 mm
- Weight 89 lb, 40.4 kg

Rack
- All entry, midrange and power configurations include Rack
- Height 72", 1,829 mm
- Width 22", 559 mm
- Depth 36", 914 mm
- Weight 1,020 lb (464 kg) full; 440 lb (215 kg) empty

Rack
- 38U rack

Environmental (Operating)
- Temperature +5°C to +35°C (+41°F to +95°F) 5,000 MSL (feet), +5°C to +30°C (+41°F to +86°F) 10,000 MSL (feet)
- Noise less than 65 dBa

Electrical and Power
- Dual power input lines, single phase
- Voltage 250 VAC (180 minimum to 257 maximum VAC) frequency 50/60 Hz
- AC distribution 250 VAC, 16 A
- US: NEMA L6-30P, 250 VAC, 30 A
- International: IEC 309, 230 VAC 32 A

[1] 300 and 400GB drives available starting CY04, Q4

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