SGI® InfiniteStorage SAN Solutions

Features

- Turnkey SAN Solution delivers state-of-the-art infrastructure
- The performance of SAN with the connectivity of NAS
- Advanced Storage Resource Management adds to consolidation TCO benefits
- Instant data sharing increases productivity for real ROI
- Industry-leading scalability and open storage provide sustainable investment protection
- Optional HA clustering, backup and data lifecycle management

Turnkey SAN Solution Delivers State-of-the-Art Infrastructure

The SGI® InfiniteStorage SAN Servers are complete SAN solutions which consolidate your storage for lower total cost of ownership (TCO) and increase your environment's productivity with instant data sharing for real return on investment (ROI). SGI® SAN servers include state-of-the-art SAN infrastructure, the ability to instantly share data among Windows®, IRIX®, Linux®, Solaris™, AIX® and Mac OS® systems and the most advanced Storage Resource Management capabilities available today.

Designed to integrate with your current environment, SGI SAN servers optimize performance between core systems while leaving non-core systems' infrastructure undisturbed. Further consolidate storage services and administration by adding SAN Server options for application high availability, backup and data lifecycle management.

The Performance of SAN with the Connectivity of NAS

SGI® InfiniteStorage SAN Servers are complete SAN solutions that also deliver network-attached (NAS) connectivity. While optimizing performance among SAN systems, the SGI® InfiniteStorage SAN 2000, SGI® InfiniteStorage SAN 3000 and SGI® InfiniteStorage SAN Gateway models provide high-performance, scalable file serving, optimizing service to your network-attached systems while leaving their infrastructure undisturbed. Unlike typical NAS or SAN gateway offerings, this powerful architecture spans SAN and NAS, eliminating "islands of information" and delivering virtually unlimited scalability in all dimensions: performance, connectivity and capacity.

Advanced Storage Resource Management Adds to Consolidation TCO Benefits

While consolidating storage in a SAN renders considerable TCO benefits in the form of higher storage utilization, lower management costs can be an even greater win. Offering the most complete Storage Resource Management capabilities available today, SGI SAN servers provide storage and system independent, intuitive, user interface access to all storage elements from the application to the spindle including: storage device and file system configuration, performance monitoring, application performance visualization, provisioning, capacity, planning and reporting: historical and realtime.

Built on SNIA Standard (SMI/S-CIM), SGI® InfiniteStorage Resource Manager has the ability to grow with your environment over time, incorporating new systems, storage networks and storage devices.

Instant Data Sharing Increases Productivity for Real ROI

Transparently share data everywhere to accelerate workflow. The SGI® InfiniteStorage Shared Filesystem CXFS™ is an integral part of SGI SAN servers that removes all LAN-based data access bottlenecks—including all network mounts and copies. All systems on the SAN have instant access to all data on the SAN reducing workflow time by up to 5x and allowing production of more and/or higher quality results in the same time for real ROI.

Industry-leading Scalability and Open Storage Provide Sustainable Investment Protection

The world's most demanding compute, graphics and I/O environments depend on SGI to drive the delivery of unsurpassed bandwidth, scalability and availability. SGI SAN servers are designed with a no-bottlenecks and no single point of failure approach.

SGI® InfiniteStorage SAN Solutions

This is achieved with a combination of the fastest available standard storage subsystems, unique system IO capabilities, LAN-free data sharing, complete available component redundancy, and intelligent data pathing.

For real investment protection over time you need scalability so benefits grow as the solution grows, and openness to accommodate changes in your environment. SGI SAN servers give you the ability to scale without limits with an infrastructure which can be augmented in any dimension. 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.

Centralize All Your Data Access, Protection and Lifecycle Management Functions for Additional TCO benefits

In addition to the productivity-based ROI gains of data sharing and the TCO benefits of storage and administration centralization, additional options for SGI SAN servers can also provide all data protection and lifecycle management for your entire environment.

High-Availability—Add application failover to the inherent reliability of the SGI SAN servers. SGI InfiniteStorage high-availability clustering software automatically fails over applications and user connections on failure or manually, to allow for uninterrupted service during routine maintenance.

Backup—SGI is the world record holder for backup performance with the only complete backup solution built specifically for high performance environments. Make your environment more productive and safer by taking control of backup and restore times and reliability. Options include your choice of industry-leading backup software packages, including Legato and Atempo, as well as disk-to-disk and disk-to-tape backup.

Data Lifecycle Management (DLM)—Accommodate the changing value of data over time without limiting user access. SGI® InfiniteStorage DLM solutions (DLM Server and Data Migration Facility - DMF) provide lower cost and faster access to data than traditional offerings. By combining RAID, Serial ATA, tape and other storage devices into a virtual storage pool, SGI DLM solutions automatically manage data to your requirements, ensuring accurate, accountable, and cost-effective retention.

Supported Hosts

SAN-Attached using InfiniteStorage Shared Filesystem CXFS with IRIX on Silicon Graphics®–64 bit systems; 64-bit Linux on SGI® Altix®; 32-bit Linux® Red Hat® 7.3 and Red Hat® 8.0; Solaris™ 8 and Solaris™ 9; AIX® 5L; Windows on any standard Intel® Pentium® II (minimum) or compatible PC; Mac OS X on the G4; other UNIX® hosts in future Network-Attached—all systems with support for NFS and CIFS.

Data Manager

	Entry	Mid	Power	Altix
• Storage capacity (TB Min/Max)	0/168	0/392	0/504	0/504
• Maximum number of CPU	2	4	8	2/16
• System memory (GB)	2/6	4/8	8/16	4/32
• Maximum number of GigE	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 [2]
- 5600GB with 14x400GB 7,200 RPM SATA drives [2]

SAN 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 400 MB/s

SAN 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 1600 MB/s

SAN Gateway

- SAN Gateway has the same specifications as SAN 2000 or 3000 model without storage module

Software

Storage Management Software

- CXFS high-performance 64-bit journaled filesystem
  - Maximum file size: 9 million terabytes
  - Maximum filesystem size: 18 million terabytes (see “Supported Hosts”)
- XVM Volume Manager: virtualization technology to organize logical data structures for high performance and ease of management
- SGI® InfiniteStorage Resource Manager: storage device and file system configuration, application performance visualization, capacity planning, performance monitoring, provisioning and reporting for 50 SAN connections
- NFS V2/V3 (UNIX clients file serving)
- CIFS (Windows client serving)
- TCP
- Dynamic capacity and volume expansion
- Performance monitoring
- Nondisruptive upgrades

Software Options High Availability

- SGI SAN with FailSafe® or Cluster Manager for Linux high availability software, redundant data manager
- SGI SAN 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™) backup and recovery option
- Automated tape libraries
- Hourly backup data rates ranging from108GB/hr to 648GB/hr
- Includes data protection application software tailored to library/drive combinations

Data Lifecycle Management Option

- SGI® Data Migration Facility, Tape Management Facility, and OpenVault™
- Automated tape libraries
- 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 seconds

On-Site Implementation for SAN 2000 & 3000

- 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

[1] 250GB drives available through CY04, Q4

[2] 300 and 400GB drives available starting CY04, Q4

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