Datasheet

SGI SAN Server™ 1000

Fully Integrated Storage Area Network (SAN) with Multi-OS File Sharing

Features

- Turnkey SAN solution with integrated SAN filesystem
- High data availability
- Industry-leading bandwidth and scalability
- Lower total cost of ownership
- Expert installation

Choosing and integrating the various hardware and software components that make up a modern SAN can be daunting. The SGI SAN Server 1000 system is an integrated storage area network solution for sharing files across heterogeneous platforms—simplifying data management and improving data-intensive workflows. Removing the complexity of implementing a SAN, SGI combines the CXFS™ SAN filesystem, redundant filesystem metadata servers, state-of-the-art high-performance 2Gb Fibre Channel RAID, and 2Gb Fibre Channel switch fabric into an easy-to-deploy, integrated solution. SGI SAN Server 1000 makes a high-performance SAN with a shared filesystem an easy choice for organizations of all sizes, decreasing storage cost of ownership and the time necessary to solve the most complex problems.

High Data Availability

SGI SAN Server 1000 combines SAN fabric and RAID disk with CXFS—the most robust, highest performing SAN filesystem in the industry. SGI SAN Server 1000 enables multiple computers with different operating systems to have direct access to a shared filesystem. If any server connected to the SAN fails, all data in the SAN is still accessible by all other servers. All systems connected to SGI SAN Server 1000 have access to the same file, at the same time, at local or near-local disk speeds. This simultaneous file access streamlines data-intensive workflow—saving time and money.

SGI SAN Server 1000 is designed from the ground up with high availability in mind—failover is provided at every level: RAID, switch port, system port, filesystem, and metadata server. This ensures critical information is always available.

Industry-Leading Bandwidth and Scalability

SGI SAN Server 1000 delivers industry-leading bandwidth and capacity. Using a state-of-the-art 2Gb Fibre Channel infrastructure SGI SAN Server 1000 provides impressive data throughput to 26 hosts simultaneously (up to 64 host support available) on the SAN. What's more, because files are shared within the SAN instead of copied over the network, the performance is orders of magnitude better than that of conventional LAN-based file sharing.

SGI SAN Server 1000 configurations scale up to 29 terabytes of storage, with the filesystem supporting 9 billion individual files. The filesystem is capable of growing to 18 million terabytes with individual file sizes up to 9 million terabytes, ensuring that as disk capacities grow your investment in SGI SAN Server 1000 is protected. To add to the simplicity of SGI SAN Server 1000, computational and storage resources may be added, deleted, or reassigned without rewiring, powering down, or moving equipment; the fabric dynamically discovers the added units without operator interaction.

Lower Total Cost of Ownership

The benefits of SAN-based storage consolidation are well known—improved disk utilization, LAN-free backup, and centralized management of resources, all of which decrease the cost of storage administration. SGI SAN Server 1000 builds on this by optimizing disk utilization; there is now a single pool of shared storage instead of multiple pools. Additional benefits are achieved through elimination of time- and disk-consuming file copying—optimizing workflow and further reducing storage and management costs.

SGI SAN Server 1000 integrates into existing LAN-based environments leaving the LAN infrastructure undisturbed while optimizing server data access and availability.

Expert Installation

Included with SGI SAN Server 1000 is on-site hardware and software installation, delivering a fully functional SAN with a shared filesystem that can address the needs of the most demanding data environments.

SGI SAN Server 1000 is at the center of a complete SGI® data management solution including backup and recovery, file serving, and seamlessly integrated hierarchical storage management (HSM). The SGI end-to-end data management solution allows technical and creative professionals to focus on innovation and insight without concern for the associated complexities of data management.

SGI SAN Server 1000 Technical Specifications

Supported Configurations

- From 730GB to 29TB of 2Gbdrives
- Connections up to 26 (up to 64 host support avalaible) IRIX®, Solaris™, and Windows NT® systems
- Support for other operating systems in CY 2003 including Linux® (32- and 64-bit), AIX® and MAC OS®X
  - Supported IRIX systems: Silicon Graphics® Octane®, SGI® Origin® 200, Silicon Graphics® Onyx2®, SGI® Onyx® 3000 series, SGI® Origin® 2000 series, and SGI® Origin® 3000 systems
  - Supported Solaris systems: Sun™ Solaris™ 8 and Ultra™ Enterprise™ 250 through Ultra™ Enterprise™ 10000 systems
  - Supported Windows NT and Windows 2000 systems: all Windows® systems with Windows NT® 4.0 Service Pack 6 on any standard Intel® Pentium® II (minimum) or compatible PC
- RAID levels: 0, 1, 1+0, 3, 5
- 800MB/sec to 4.8GB/sec data rates
- Maximum file size: 9 million terabytes (or the system drive limits)
- Maximum filesystem size: 18 million terabytes (or the system drive limits): journaled, shared, 64-bit with guaranteed filesystem consistency
  - Filesystem block size:
    - 512 bytes to 64KB for normal data and up to 1MB for real-time data
    - Configurable filesystem extents (contiguous data); single extents up to 4GB in size
  - Partitioning: up to 64,000 partitions, 64,000 wide stripes and dynamic configurations
  - Physical disk sector size supported: 512 bytes

Dimensions

- 1 to 2 racks: each 72" H x 36" D x 22" W (38 EIA units)

Network Connectivity

- Network connection: Ethernet—1 10Base-T/100Base-TX and 1 Gigabit Ethernet—copper 3200MB/sec peak included

Safety

- North American NRTL (cULus or cCSAus or equiv), CB Scheme Report
- EMC
  - FCC Class A
  - ICES Class A
  - VCCI Class A
  - BSMI Class A
- Immunity
  - EN55024
  - EN61000-3-2 (If applicable)
  - EN61000-3-3 (If applicable)
- Other
  - CE

Solution Options for Backup, Archive, and High Availability

- Backup and recovery:
  Supports automated tape libraries with capacity range of 2–21TB; Hourly backup data rates ranging from 54GB/hour to 324GB/hour; includes data protection application software tailored to library/drive combinations
- Hierarchical storage management (HSM):
  Supports automated tape libraries with capacity range of 15–40TBAverage access to first byte of data stored on tape is 18–23 seconds
  Supports SGI® Data Migration Facility, Tape Management Facility, and OpenVault™
- Supports: FailSafe™ high-availability clustering software

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