sgi®

SGI® File Server

Features

- Scalable capacity and performance
- Flexible configurations
- High reliability and availability
- Low total cost of ownership

High-Performance Network-Attached Storage Solution

The SGI File Server system provides high-performance network-attached storage (NAS) solutions for the most demanding engineering and creative environments. It centralizes critical data and allows for efficient data management. SGI File Server provides universal data access for heterogeneous environments without sacrificing performance. Available in multiple configurations, SGI File Server easily connects an Ethernet network to serve both UNIX® and Windows® OS clients.

Scalable Capacity and Performance

SGI File Server provides virtually unlimited capacity—scaling to over 50 TB in a standard configuration without sacrificing performance. SGI File Server Systems come standard with the world-leading high-performance SGI® XFS™ filesystem. The proven XFS technology ensures high reliability through journaling, extremely fast lookup and transfer speeds, and unsurpassed scalability. Using XFS, custom SGI File Server configurations can support petabyte-size filesystems and individual files.

Flexible Configurations

SGI File Server provides the flexibility to support your changing business requirements. Transparent integration into UNIX and Windows environments ensures your information will be seamlessly available. SGI File Server can be incorporated into storage area networks (SANs), providing even greater performance while reducing redundant SAN and NAS storage pools. Optional features include hierarchical storage management (HSM) to better balance and manage online and near-line storage, backup and data replication to ensure the safety of your data, and high-availability features to maximize uptime.

High Reliability and Availability

SGI is known for the exceptional reliability and resiliency of its IRIX® operating system. Coupled with hardware designed from the ground up with high availability in mind and features such as redundant power supplies and cooling fans and hardware RAID, you can be assured your data will always be safe. Adding high-availability application failover, multiple point-in-time copies of the filesystem, and fast backup options further assures the reliability and accessibility of information, protecting against data loss due to application or user error.*

Low Total Cost of Ownership

Along with delivering world-class performance, SGI File Server is designed with simplicity and growth in mind. Its modular architecture allows users to add more storage without running the risk of costly maintenance, downtime, and "forklift" upgrades, thereby reducing overall storage costs. SGI File Server reduces storage costs by providing a flexible, centralized storage pool that is easy to monitor, manage, secure, and grow. SGI File Server systems are fast, scalable, and secure data management solutions that simplify the sharing and management of your valuable data assets.

*Point-in-time copies available Q4CY2002

Maximum Capacity

Base Configuration
- SGI File Server 830   2.9TB
- SGI File Server 850   4.4TB

With Expansion Module
- SGI File Server 830   8.6TB (single rack)
- SGI File Server 850   51.3TB (multiple racks)

Data Manager

Data Manager Base Configuration
- 2 64-bit MIPS® RISC 600 MHz CPUs, 1GB system memory
- 10/100 Ethernet and 1GB Ethernet (standard with SGI File Server 850; optional with SGI File Server 830)
- I/O connections
  - 2 full-size 64-bit 66 MHz 3.3 V/universal PCI
  - One Ultra160 SCSI channel

Storage Module
- SGI File Server 830   SCSI JBOD with optional RAID 1+0 support
- SGI File Server 850   Fibre Channel RAID dual/active controllers, copper connection

Storage Module Capacity
- SGI File Server 830   144GB enclosures with 8x 18GB 15,000 RPM Ultra160 SCSI drives or 584GB enclosures with 8x 73GB 10,000 RPM Ultra160 SCSI drives
- SGI File Server 850   432GB with 12x 36GB 15,000 RPM Fibre Channel drives or 876GB with 12x 73GB 10,000 RPM Fibre Channel drives

Storage Interfaces
- SGI File Server 830   Ultra160 SCSI
- SGI File Server 850   Fibre Channel

I/O Bandwidth

Data Manager
- 420MB/sec sustained, 512MB/sec peak per PCI connection
- Ultra3 SCSI: 160MB/sec SCSI channel

Storage Module Maximum Bandwidth
- SGI File Server 830   160MB/sec
- SGI File Server 850   100MB/sec

HBA
- SGI File Server 830   160MB/sec
- SGI File Server 850   100MB/sec

Software

Operating System
- IRIX® 6.5

Filesystem
- XFS 64-bit journaled filesystem with guaranteed rate I/O

Networking Software
- NFS V2/V3 (UNIX clients file serving)
- Samba for IRIX (CIFS Windows client serving)
- Bulk Data Service (BDSpro)
- TCP/IP, RSVP, DHCP, NetVisualyzer™

Options

Data Manager Configuration with Expansion Module
- 4 64-bit MIPS RISC 600 MHz CPUs, 2GB system memory, 10/100 Ethernet, up to 2 1GB Ethernet
- I/O connections
  - 14 full-size 64-bit 66 MHz 3.3 V/universal PCI
  - One Ultra160 SCSI channel

High Availability
- SGI File Server 830   N/A
- SGI File Server 850   FailSafe™ high-availability software, second data manager

Backup
- Automated tape libraries with capacity range of 2–21TB
- Hourly backup data rates ranging from 54GB/hr to 324GB/hr
- Includes data protection application software tailored to library/drive combinations
- Requires data manager with expansion module

HSM
- Automated tape libraries with capacity range of 15–31TB.
- Average access to first byte of data stored on tape is 18–23 seconds.
- Includes SGI® Data Migration Facility, Tape Management Facility, and OpenVault™
- Requires data manager with expansion module

Support and Warranty
- One-year hardware warranty with on-site, next-day response; SGI offers a complete complement of comprehensive hardware and software service offerings that can be tailored to fit your needs
- The SGI industry-leading electronic support tool suite is available at no additional cost to Warranty, SGI® FullCare™ and SGI® FullExpress™ customers

Mechanical Requirements

SGI File Server 830
- 17U Rack   Dimensions: 36.06" (916 mm) H x 40.63" (1032 mm) D x 25.38" (645 mm) W
  Weight 675 lbs (306 kg) max.
  Access Requirements:
  Front: 36" (914 mm) min., 48" (1122 mm) recommended
  Rear: 36" (914 mm)
  Side: None
- 39 U rack   Dimensions: 75.82" (1926 mm) H x 41.25" (1048 mm) D x 23.62" (600 mm) W
  Weight 1431 lbs (649 kg) max.
  Access Requirements:
  Front: 36" (914 mm) min., 48" (1122 mm) recommended
  Rear: 36" (914 mm)
  Side: None

SGI File Server 850
- 39 U rack   Dimensions: 75.82" (1926 mm) H x 41.25" (1048 mm) D x 23.62" (600 mm) W
  Weight 1260 lbs (572 kg) max.
  Access Requirements:
  Front: 36" (914 mm) min., 48" (1122 mm) recommended
  Rear: 36" (914 mm)
  Side: None

Environmental (Nonoperating)
- Temperature   -40°C–60°C (40°F–+140°F)
- Humidity   10%–95% noncondensing
- Altitude   40,000 MSL

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

Electrical and Power
- Voltage   220 V AC
- Frequency   50/60 Hz
- Heat dissipation   14.67 kBtu/hr, max.
- Electrical service   200/240 VAC at 30A single-phase 8 ft (2.4 m) pluggable drop cord