SGI® InfiniteStorage 4500

High Performance Modular Storage

Features
- Increase Connectivity
- Reduce Network Complexity
- Scalable and Versatile
- Continuous Availability
- Comprehensive Storage Management
- RoHS Compliant

The SGI InfiniteStorage 4500 is the flagship of SGI's storage system product line. By delivering the ultimate levels of performance, capacity and scalability, the SGI InfiniteStorage 4500 is designed to handle the challenges that face today's datacenter – from management overhead demands and lack of datacenter space to the changing requirements of performance intensive business applications.

Increase Connectivity

Applications like satellite ingest, image processing, dynamic fluid modeling, and modeling of complex interactive systems demand the very highest bandwidth. Historically, customers have multiplexed several 2Gb Fibre Channel streams to deliver the bandwidth now available from a single 4Gb Fibre Channel connection. Each of the SGI InfiniteStorage 4500's 4Gb host channels can deliver up to 400MB/s peak bandwidth, reducing the quantity of channels, adapters and switch ports required to meet application requirements. And the eight host channels all have access to the SGI InfiniteStorage 4500 cache system, providing for multiple high performance access points for interactive applications like email and data base, ensuring the fastest response times.

Reduce Network Complexity

InfiniBand has become a preferred clustering technology for very large, cost effective Linux® server clusters. Traditionally the merging of IB-based clusters and FC-based storage systems has required the use of costly and inefficient IB-to-FC gateways that have served no other purpose than to convert protocols. The SGI InfiniteStorage 4500 storage system's native InfiniBand interfaces enable it to attach directly to the existing InfiniBand fabric switches in use by the cluster, providing significant cost savings and simplifying the network. Additionally, native InfiniBand interfaces require no IB-to-FC protocol translations within the controller, enabling higher performance and lower latency.

Scalability and Versatility

Capable of supporting up to 168 TB in a single system, the SGI InfiniteStorage 4500 enables the customer to efficiently respond to the growth in data that challenges most IT infrastructures. Custom configurations can be built to address specific performance, cost and capacity requirements using combinations of high-performance Fibre Channel, general purpose Fibre Channel and high capacity SATA II disk drives. The innovative high density drive packaging allows Fibre Channel drive modules and SATA drive modules to be intermixed almost indiscriminately.

Continuous Availability

Around the clock processing demands the highest availability from your storage systems; featuring fully redundant I/O paths, automated failover, hot-swappable components and online administration, the SGI InfiniteStorage 4500 ensures that your critical data remains accessible. And to provide added recovery insurance for external events, the SGI InfiniteStorage 4500 offers a suite of business continuance features that can support both operational and disastrous data recovery strategies.

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Comprehensive Storage Management

As capacities and capabilities of your storage environment expand, the SGI InfiniteStorage 4500's management software allows you to dramatically simplify management tasks. The powerful, yet easy to use management software enables centralized administration of multiple storage systems from any location on the network regardless of host or client platform. Enabling configuration flexibility and ensuring uptime and data availability, the SGI InfiniteStorage 4500's management software facilitates a storage strategy that is aligned with your business goals.

Controller

	4500 "F" Model	4500 "H" Model
• RAID Controllers	Dual, active	Dual, active
• Cache Size	4 GB	2 GB
• Host Interface	4 Gb Fibre Channel	4 Gb Fibre Channel or InfiniBand
• Host Paths	8 FC	8 FC or 4 IB
• Partitions	2 Standard	2 Standard
• Additional Cache Upgrades	8GB, 16GB	Not Available

Optional Software Features

• Additional partitions	4, 16, 64	4, 16
• SnapCopy	Supported	Not Available
• Volume Copy	Supported	Not Available
• Remote Volume Mirroring	Supported	Not Available
• SATA/FC Drive Intermix	Supported	Not Available

Controller Features

• RAID	0, 1, 1+0, 3, 5
• Battery backup	7-day maximum
• LUNs	256 per partition, 1024 per system
• Volume group	Up to 30 drives (29+1) for a RAID 5 group
• Global hot spare drives	Up to 15
• Rack support	SGI rack options and 19" industry standard racks with mount kits
• Standard redundancy	RAID controllers, power supplies, cooling fans, FC drive loops
• Controller management	In-band or out-band via 2 Ethernet ports
• Diagnostic interface	2 RS-232 Ports

Host Connections

- 4 Gb Fibre Channel or 10 Gb InfiniBand
- LC optical connectors for Fibre Channel or IB connectors

Drive Enclosure Connections

- Two 4 Gb Fibre Channel Loops, redundant
- Fused copper cable SFP assembly

Expansion Enclosure Dimensions

- Height 5.25", 13.1cm, 3 U
- Width 17.6", 44.7cm
- Depth 23.5", 59.7cm
- Weight 2 ESM's, no drives: 21.4 lbs. (9.7 kg)
  2 ESM's 16 drives: 56.1 lbs. (25.4 kg)

Controller Dimensions

- Height 6.9", 17.5cm
- Width 19.0", 48.3cm
- Depth 25.6", 65.1cm
- Weight 80.5 lbs. (36.5kg)

Rack Dimensions 40U

- Height 78", 198.1 cm
- Width 24", 60.9cm
- Depth 40", 101.6cm
- Weight 300 lb (135 kg) empty

Drive Options

- 73 GB, 15K rpm, FC
- 146 GB, 10K and 15K rpm, FC
- 300 GB, 10K and 15K rpm, FC
- 400 GB 10K rpm FC
- 500 GB, 750 GB and 1000 GB 7200 rpm, SATA
- Drives per enclosure: Minimum 4; Maximum 16
- Drives per rack: Minimum 4; Maximum 192
- Drives per system: Minimum 4; Maximum 224

Environmental (Operating) Operating Temperature

- Minimum: 10˚ C (50˚ F)
- Maximum: 40˚ C (104˚ F)

Operating Relative Humidity

- 20% to 80% (non-condensing)

Temperature Change

- 10°C/hr

Operating Altitude

- Minimum: -30.5m (-100 ft)
- Maximum: 3,000m (9,840 ft)

Host Management

InfiniteStorage System Manager Enterprise Edition

- Out-Band management
  - RHEL 3, 4
  - SLES 8, 9
  - Windows 2003 Server Edition
  - Solaris 8, 9, 10
  - IRIX 6.5.28
  - AIX 5.2, 5.3
  - Windows XP Professional
  - SuSE Professional 9.x – Windows Vista
- In-Band management
  - RHEL 3, 4
  - SLES 8, 9
  - Windows 2003 Server Edition
  - Solaris 8, 9, 10
  - IRIX 6.5.28
  - AIX 5.2, 5.3
- Software features
  - Immediate LUN availability
  - Performance Monitoring
  - Non-disruptive firmware upgrades
  - Management window provides a comprehensive view of all Total Performance 9XXX and InfiniteStorage 4XXX systems in the management domain

Optional Host Software

CXFS

- Heterogeneous shared file system for storage area networks; eliminates the need for replication of data across a network by allowing multiple users to share one version of content at Fibre Channel speeds
- Host Attachment via CXFS- Solaris™, Windows® NT, Windows® 2000, AIX, MAC OS X, 32-bit Linux®, 64-bit Linux®

DMF

- Data Lifecycle Management (Archive) policy automation software virtualizes storage devices and automates the migration and archive of studio content throughout the virtual storage pool based upon business policies

Power (40U rack)

- 200-240 VAC, 50 to 60 Hz
- NEMA L6 30 (US), IEC 309 (Intl)
- 48A Max @ 200-240 VAC per PDU

Regulatory Compliance

- Manufactured under an ISO 9000-registered system
- UL 1950 CSA 22.2 No.950 IEC 950, EN 609
- RoHS Compliant

Warranty

- 3 years hardware repair and replacement, 5x9 on-site next business day response, upgrade options to extended years, 7x24, 2 hour response

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3944 [04.04.2008] J15168