High Performance Network Attached Storage

SGI® InfiniteStorage NAS

HIGHLIGHTS

- iSCSI Block and File Access
- Global Namespace
- Cluster Namespace
- Secure Virtual Storage Servers
- Dynamic Read Caching
- Intelligent Tiered Storage with Data Migration
- Storage Pools with Thin Provisioning
- Dynamic Data Re-balancing
- Snapshots with Instantaneous Rollback
- Active/Active Clustering
- Synchronous and Asynchronous Replication
- Integrated Backup
- Integrated Anti-virus Scanning

The SGI InfiniteStorage NAS platforms are next generation network storage systems that deliver high performance and scalability while enabling storage consolidation across a variety of applications. SGI InfiniteStorage NAS can eliminate storage silos commonly associated with legacy network storage by supporting multiple applications and a high large number of concurrent users. As a result, customers can simplify their management and reduce infrastructure expenditures.

Higher Performing NAS

The SGI InfiniteStorage NAS systems enable no-compromise performance while eliminating the challenges of large file system management and data availability. A global namespace creates a single logical view of the data regardless of where it physically resides. In addition, the Cluster Namespace feature simplifies the management of virtual servers and physical nodes as usage and performance requirements change, without impacting user access to data. Each InfiniteStorage NAS node or cluster can be partitioned into 64 virtual servers with their own IP address, policies and file systems. These virtual servers can be managed within the cluster for load balancing and to manage capacity. Dynamic Storage Balancing stripes data across the maximum number of available spindles, optimizing performance and resource utilization. As capacity is added, the new spindles become immediately available to improve performance.

Automated Storage Tiers

Rules based policies can be implemented on SGI InfiniteStorage NAS systems to automatically utilize the most cost effective storage management scheme. As the data is migrated between tiers the file system remains intact making this activity completely transparent to end users. Dynamic Read Caching instantly migrate access files from lower performing tiers to SSDs or high performance disk drives to improve response times and aggregate bandwidth during spikes in demand.

Optimizing the Storage Ecosystem

The SGI InfiniteStorage NAS platforms leverage a hybrid architecture that delivers the highest performance available in mid-range systems. Employing field programmable gate arrays (FPGAs) and traditional multi-core processors; this architecture separates data movement and management processes that normally compete for system resources. Data is transferred between logical blocks in a point-to-point fashion, preventing conflicts or bottlenecks and ensuring consistently high performance. The hybrid architecture works in combination with advanced data management services and an integrated Storage Ecosystem to deliver an optimized storage solution. For entry configurations, SGI InfiniteStorage NAS single nodes and clusters can be directly connected to storage arrays using built-in SAN ports, reducing infrastructure complexity. In more advanced configurations, a Fibre Channel SAN can be deployed enable LAN free data movement and full data path redundancy. This architecture also ensures that a solution can scale up or out independently.

SGI® InfiniteStorage NAS

System Specifications

www.sgi.com/products/storage/nas/

	NAS 50	NAS 100
Max number of Cluster Nodes	2	4
Max Capacity	1 PB	2 PB
IOPS per Node	Up to 60,000	Up to 100,000
NFS Throughput per Node	Up to 700 MB/s	Up to 1,100 MB/s
Max File System Size	128 TB	256 TB
Hardware		
System Memory	4GB NVRAM	
NVRAM Battery	1 hot-swappable (72 hr. recovery window)	
LAN Interfaces	6 x 1GbE, 2 x 10 GbE, Supports dual connectivity and port aggregation	
Backend Interface	4 x 4 Gb Fibre Channel	
Clustering	2 x 10 GbE, active-active for high availability	
Private Management Network	2 x 1 GbE Native Ports, 5 x 100 MbE Switch Ports	
Cooling Fans	3 hot-swappable	
Power Supplies	2 load sharing, hot-swappable	
Software Features		
Managament Interfaces	GUI and CLI-based management	
Standard Features	• Snapshots and Quick Restore • Virtual Servers • Virtual Volumes • Virtual Storage Pools • Storage Balancing • Quotas - by volume, group or users • NDMP • Anti-Virus Support • RAID levels 1, 10, 5 and 6	
Optional Features	• Data Migrator • Dynamic Read Caching • Active-Active Clustering • Global Namespace • Replication • File System Rollback from Snapshot • Virtual Server Migration • Secure Virtual Servers	

Software and File System Specifications	
Network File System Protocol Support	• Common Internet File System (CIFS) • Network File System (NFS)- v2, v3, v4 • iSCSI
Network Transport Protocols	• NDMP v2, v3, and v4 • File Transfer Protocol (FTP) • Ethernet • TCP/IP • UDP
Number of File systems per Namespace	128
Number of Directory Entries	16 Million
Number of Snapshots per File System	1024
Number of Virtual Volumes	10,000
Number of Virtual Servers	64
Number of IP Addresses	256
Power	
Voltage Range	100 to 240 VAC
Amperage (Average/Maximum)	• 110 VAC - 2.3A / 2.8A • 208 VAC - 1.2A / 1.5A • 230 VAC - 1.1A / 1.4A
Power Supply Rating	450W
Average Power Usage	250W (310W max)
Average Thermal	853 BTU/hr (1057 BTU/hr max)
Chassis Dimensions	
Rack Height	3 U
Height	5.1", 12.9 cm
Width	17.2", 43.7 cm
Depth	27", 68.5 cm
Maximum Weight	55 lbs., 24.9 kg

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