

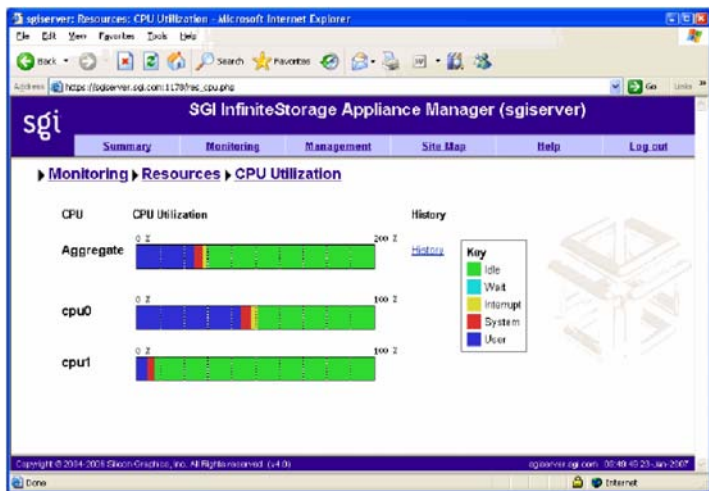
White Paper

Monitoring and Managing Data in High Performance Storage Solutions

The increasingly complex process of storing, organizing and retrieving information can put a strain on businesses facing a relentless daily tidal wave of data. To manage that massive amount of data, businesses need a storage solution that not only has the capacity, flexibility and scalability to meet present and future datacenter needs, but which is fully integrated into the infrastructure and capable of making data easily and reliably accessible. SGI® InfiniteStorage provides just that, with the help of its innovative SGI InfiniteStorage Appliance Manager, a software tool for providing fast and easy configuration set-up, performance, diagnosis and disk utilization monitoring.

SGI InfiniteStorage Appliance Manager is a Web-based interface that enables users to configure, manage and monitor the storage server to meet constantly accelerating data storage requirements. Developed for customers with demanding storage environments where ease of use in appliance management and immediate access to large amounts of data are required, SGI InfiniteStorage Appliance Manager works with SGI InfiniteStorage NAS solutions to optimize performance-driven applications.

SGI InfiniteStorage Appliance Manager taps into the power of SGI InfiniteStorage by enabling users to perform initial system configuration, configure system components, perform general system administration tasks and monitor current and historical views of performance. Additionally, the SGI InfiniteStorage Appliance Manager makes it possible to view connected clients and determine how each of these contributes to the current workload. Users can also detect and investigate problems with SGI InfiniteStorage Appliance Manager as well as monitor the data migration facility (DMF) and perform DMF configuration tasks. Finally, A SGI InfiniteStorage Appliance Manager makes it possible to create CXFS™ file systems, add and delete CXFS client-only nodes, monitor CSFX file systems and nodes and download client software to client only nodes.



Monitor and Manage

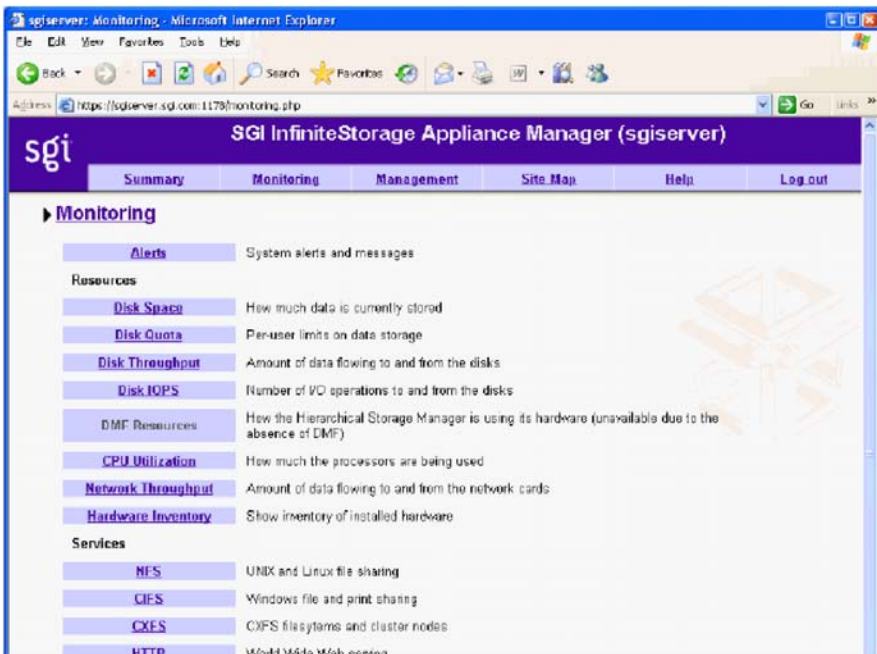
SGI InfiniteStorage Appliance Manager delivers essential information for an at-a-glance overview to tell datacenter managers what is happening at any given moment, over the last hour or over the last day. Using the Summary view, datacenter managers can also drill down for detailed data and obtain historical graphs for capacity planning.

SGI InfiniteStorage Appliance Manager makes it possible to monitor all aspects of the NAS server, including network, disk, CPU and memory usage, per protocol workload, per export/share workload, per client workload and historical graphs. Monitoring is possible through alert displays or messages from system logs. The Alerts screen displays messages from system logs to provide informative messages, notifications of unusual events and error conditions.

Additionally, users can view the status of selected groups of resources and services groups such as NFS, CIFS and CXFS. Disk space management is made possible by providing views of disk space usage and enabling the setting of disk quotas to provide limits on the number of files and the amount of disk space a user is allowed to consume. SGI InfiniteStorage Appliance Manager also monitors disk throughput and IOPS, DMF resources, CPU utilization, network throughput and hardware inventory to keep users aware of potential problems.

Workload management is crucial to achieving balance in demanding applications. SGI InfiniteStorage Appliance Manager allows users to view connected clients and determine how each contributes to the current workload so that the datacenter manager can understand workload in detail. Views provide insight into bandwidth, IOPS, Read and Write size distribution, response time histograms and historical graphs. SGI InfiniteStorage Appliance Manager even displays the top 10 resource “hogs” based on bandwidth and IOPS. Detailed views of per-client workload based on NFS and CIFS are also available.

Designed for comprehensive performance monitoring, SGI InfiniteStorage Appliance Manager provides current and historical views of the state and the activity of the storage server, continuously gathering performance metrics regarding workloads and making them available for viewing snapshots of current activities or storing performance data in archives. Current metrics are either drawn live from the server or are taken from the last few minutes of the metric archives. Monitoring these metrics enables users to isolate performance issues and plan storage for changing workloads.



Optimized for Demanding Applications

Designed to meet the requirements of mixed or multi-user workloads in such data intensive applications as media production, data mining and oil and gas research, SGI InfiniteStorage Appliance Manager helps to manage the bandwidth, reliability and scalability for which SGI NAS solutions are known.

SGI InfiniteStorage Appliance Manager features simple, on-site set up enabling users to be up and running in a matter of minutes without sacrificing high-performance capabilities. Its easy-to-manage NFS protocol is integrated with IPowerIB, GigE and 10GbE for simultaneous sharing to different classes of clients, streamlining network storage administration.

SGI InfiniteStorage Appliance Manager brings comprehensive NAS management to the user's fingertips through a simple one click interface that provides insight into file systems and storage, authentication, networking, snapshots, remote replication, NFS access and options and CIFS access and options.

Tightly integrated with the NAS hardware model, SGI InfiniteStorage Appliance Manager leverages simultaneous CIFS serving. Its enhanced security is based on mandatory authentication, integrity and privacy features.

Excellence in Storage Solutions from the HPC Leader

A recognized leader in the development of high performance enterprise solutions, SGI is known for its scalable system architecture. The company brings that same performance and scalability to its groundbreaking InfiniteStorage line of storage solutions. With the help of SGI InfiniteStorage Appliance Manager, SGI InfiniteStorage NAS solutions provide high-performance network-attached storage services for data-intensive engineering and commercial environments.



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