



Nexsan iSeries Advantage

	Nexsan iSeries™	Dell-EQ™/HP-LH™
Virtualization	●	●
Snapshots	●	●
Replication	●	●
Automated site failover	●	●
99.999 architecture	●	●
Single, intuitive interface	●	●
Automated integrity checks	●	●
Redundant Components	●	●
Dual active/active SAN controllers ¹	●	◐
Expandable RAID Architecture ²	●	
AutoMAID™ energy savings ³	●	
High speed synch. mirroring ⁴	●	
SAS+SATA Flexibility ⁵	●	
Share storage with FC & NAS ⁶	●	
Database optimization ⁷	●	
Low cost scalability ⁸	●	
Data migration ⁹	●	

¹ Dual active/active SAN controllers - Maximize performance and provide continuous access

Dell/EQ controllers are passive / active providing half the performance. HP/LH SAN controllers are not independent. They are bound to the same enclosure. A controller is forced to contend for and share the same resources used by the other controller, file system and operating system. The net result is slower responsiveness and the creation of a single point of failure. Data stored on a Dell/EQ or HP/LH storage system cannot be written or read in real-time by any other Dell/EQ or HP/LH system which limits real-time data protection, high availability and 99.999 continuous access. Nexsan iSeries iSCSI SAN appliances are independent active / active SAN controllers. Each Nexsan iSeries controller has its own enclosure with dedicated CPUs, memory, power supplies and real-time operating system to guarantee consistent high performance, uncontested low latency and complete fault isolation. Moreover, Nexsan iSeries controllers are independent of the storage systems and able to write and read any data on any storage system in real-time. This ensures continuous access to any data regardless of its location within the Nexsan iSeries.

² Expandable RAID Architecture - Each added storage module has a performance engine

Competing iSCSI SANs cannot scale capacity and performance independently, therefore, users are forced to invest in another complete SAN system to get the added capacity and installation is not easy. Two independent SAN systems need to be combined to create a single SAN requiring data migration and the redirection of some servers. Nexsan iSeries unique architecture allows users to increase capacity and performance without having to purchase additional SAN appliances. Each added storage system leverages the performance of the Nexsan iSeries appli-

ance by adding its own independent performance engine. Each added storage system adds 4 additional high speed RAID engines and 4GB of battery protected cache. In addition, users don't need to migrate data across IP or redirect servers every time capacity is needed. Each Nexsan iSeries storage system connects seamlessly with all Nexsan iSeries clustered appliances within seconds, and production volumes can be easily expanded while remaining on-line.

³ AutoMAID energy savings - Energy cost saving technology

No other iSCSI SAN provides the energy saving technology included with Nexsan iSeries. Nexsan AutoMAID, included with all Nexsan storage systems, has multiple energy saving levels. AutoMAID is granular to an individual drive, RAID set or storage pool and offers multiple levels of energy savings. AutoMAID is user selectable enabling users to determine the right level of response time performance to energy savings. AutoMAID significantly reduces electrical and cooling requirements resulting in an energy cost savings of up to 60%. Level 1 AutoMAID delivers significant savings while delivering sub-second response time from idle disks uniquely delivering 'speed with green'.

⁴ High speed synchronous mirroring - High speed real-time data protection

Other iSCSI SANs claim to support synchronous replication for data protection but fail to explain the performance impact caused by sending a second write command to another SAN over an IP connection. Waiting for a write command to be acknowledged and returned by another SAN over IP is extremely time and resource intensive. It greatly reduces the responsiveness required to support performance sensitive applications like databases. Nexsan iSeries is designed for high speed. Data is not replicated to another SAN but mirrored synchronously across near zero latency connections to multiple iSeries RAID storage systems. Nexsan iSeries provides the same level of data protection as other iSCSI SAN without adversely impacting performance.

⁵ SAS+SATA Flexibility - Performance and capacity in the same system

With other iSCSI SANs, users are forced to decide between performance and capacity. Competing iSCSI SANs can not combine SAS and SATA within the same system. If users want an iSCSI SAN to meet performance and capacity driven environments, they must purchase two completely different systems to address all their requirements. Nexsan iSeries does not have this limitation. Nexsan iSeries has been uniquely engineered to support both SAS and SATA drives in the same system to meet the broadest range of storage requirements from databases to backup.

⁶ Share storage with FC & NAS - Share Nexsan storage with iSeries, The Edge (NAS) and FC hosts

With other iSCSI SANs, the storage resources (disk drives) are captive within the SAN appliance and can not be easily shared to address other needs like NAS or FC hosts. Nexsan iSeries storage systems are not captive, they are independent RAID systems. They can easily be partitioned to share excess capacity with other appliances and hosts like Nexsan The Edge to provide NAS connectivity or can be directly connected to an FC SAN to support FC enabled hosts.

⁷ Database optimization - Independent low latency RAID sets for data and logs

Most database applications demand that data files and log files be placed on separate RAID sets in order to provide optimum responsiveness and avoid degraded performance. Other iSCSI SANs are rigid. They can not provide more than a single RAID set per system creating a poor environment for databases. Nexsan iSeries is designed to support multiple applications with different performance requirements including databases. With Nexsan iSeries, users can have different physical RAID sets on the same system - one for data and one for logs which makes the Nexsan iSeries the clear performance leader and the ideal choice to meet SME database requirements. To achieve the same result, other iSCSI SANs force the user into purchasing two completely separate SAN systems - one for logs and one for data.

⁸ Low cost scalability - Scale without having to purchase more SAN appliances (scale under \$1000 per TB with Nexsan storage)

Nexsan iSeries storage systems are independent systems. Nexsan iSeries combines any Nexsan SASBeast, SATABeast, SASBoy and SATABoy into the iSCSI SAN. Unlike other iSCSI SANs where users have to buy another proprietary appliance to increase capacity, Nexsan iSeries uses any basic Nexsan FC connected SAS or SATA RAID system. Users can scale capacity and create different storage pools at a fraction of the cost of other iSCSI SANs. By leveraging the low cost scalability architecture of the Nexsan iSeries, users can expand capacity for as little as \$1 per GB.

⁹ Data migration - Migrate data from legacy storage systems or between storage systems without service disruption

Migrating data off legacy FC storage systems onto other iSCSI SANs can be extremely time consuming requiring special software while often causing service disruptions. Nexsan iSeries enterprise feature set includes data migration services. Simply connect the storage system into one of the FC storage ports on the iSCSI SAN appliance and instruct the Nexsan iSeries to migrate the old volumes onto new volumes. It's that simple. Data migration from legacy systems, or between storage pools within the iSeries iSCSI SAN, is done in the background without service disruption and can reach speeds of over a TB per hour.