



## BOSTON IGLOO NXSTOR SBB

Mission-critical applications need fault-tolerant storage to ensure maximum uptime and Boston's latest NXStor SBB takes high availability to the next level. This compact 3U rack system is a complete storage cluster, as it combines two redundant controllers, or nodes, to provide uninterrupted access to data.

Another advantage of the NXStor is that it doesn't lock you in to proprietary hardware solutions, as it uses industry standard x86 server technology. There's a lot more to the NXStor, as it's a truly unified storage solution that supports NAS and IP SANs, along with optional FC SANs.

It also offers an extensive range of standard features that many competing vendors charge heavily for as options. The price for the review system includes unlimited snapshots, integral data compression, thin provisioning, remote replication and even data deduplication.

At the NXStor's heart beats the NexentaStor Enterprise software, which is based on the OpenSolaris ZFS (Zettabyte File System). This provides all the unified storage features, but goes much farther, as it removes the limitations imposed by other file systems such as maximum pool, volume and file sizes.

A key feature of the NXStor solution is it includes Nexenta's HA Cluster plug-in, which allows both nodes to run in fault-tolerant mode. The HA Cluster plug-in has a sophisticated heartbeat system for monitoring node integrity and to ensure node failure is correctly diagnosed.

It uses a quorum hard disk and a network



connection for heartbeat monitoring and, once node failure has been verified, then all storage services are taken over by the functioning node. The review system was configured for NAS and IP SAN operations, but each node has three expansion slots that accept extra 10-Gigabit and FC cards.

The chassis came populated with twelve of the latest Seagate 2TB near-line SAS hard disks for general storage duties, a single quorum disk and three SSDs for caching functions. The data drives are configured in a fault-tolerant striped mirror, with frequently used files cached to a single SSD for fast read access. The NXStor uses a pair of mirrored SSDs for write caching to improve performance even further.

The NXStor offers a truly massive expansion potential, as each node has an external SAS port that can be used as a means to daisy-chain more storage arrays. Linking each array to both nodes brings in multi-path redundancy and, as ZFS has no realistic size limitations, you can expand your storage pools into Petabyte capacities.

The NXStor's web interface is very intuitive and we placed the two nodes in an HA cluster

with automatic failover. The data drives are placed in storage pools, within which you create NAS shares and iSCSI target volumes, and for the latter decide whether to enable thin provisioning.

We tested fault tolerance by removing one node from the chassis. After the requisite number of heartbeats had gone unanswered, the web console acknowledged the node failure and all operations were shifted to the functioning node. There is a brief delay as I/O operations are paused whilst failover takes place, but our test servers didn't lose contact with their mapped NAS shares and iSCSI targets.

When we returned the node to its rightful place, failover operations were automatically reinstated. We also found general performance to be very good, with iSCSI targets returning top raw read rates of over Gigabit of 112MB/sec, with NAS share speeds not far behind.

**Product:** Igloo NXStor SBB  
**Supplier:** Boston  
**Tel:** 01727 876 100  
**Web site:** [www.boston.co.uk](http://www.boston.co.uk)  
**Price:** £34,995

**VERDICT:** The Igloo NXStor SBB offers a superb range of network storage features, along with top performance and a remarkable expansion potential. Best of all is that it delivers a fault-tolerant storage cluster in a single system that's very easy to deploy and manage.