SUCCESS STORY

QLogic Production Engineering

With more than 15 years of diverse storage experience, QLogic is the only company that provides end-to-end connectivity for the SAN. The company is committed to delivering and servicing open-standard, SAN infrastructure solutions that can be tailored to complement the diverse requirements of OEMs, system integrators and resellers. QLogic is working to advance common SAN technology roadmaps, not just point products, that result in superior, interoperable solutions that customers can bring to market quickly and confidently. For the first time, customers can rely on a single contact for all the critical connections of the SAN infrastructure.

Today, QLogic runs on QLogic. According to Mark Dargitz, manager of QLogic's network and SAN support department, this statement is far from marketing hype. The result of careful needs assessment, planning and execution, QLogic's end-to-end SAN represents a truly innovative application for this highly flexible storage architecture.

"Our SAN serves the production engineering department at QLogic," stated Mark. "If you look at this department's requirements—high availability, data sharing with read/write capabilities, high performance—most people would think a Network Attached Storage (NAS) solution would suffice. However, we are able to deliver high performing file services with our SAN while circumventing the pitfalls of accessing and modifying shared data over a LAN."

COMPANY
QLogic

INDUSTRY
ASIC Design

APPLICATIONS/SOFTWARE
Storage Area Network

HARDWARE/SOFTWARE
Sun SunBlade 1000 servers
Sun T3 Partner Pairs RAID
QLogic SANbox 16 port FC switches
QLogic SANblade Host Bus Adapters (HBAs)
Fibre Channel Tape Library

KEY BUSINESS RESULTS
QLogic end-to-end solution; High availability; Zoning; Read/write access to shared data; Cost-competitive solution; LAN-free backup: Scalability; 100x increase in performance; Ease of management

While SAN is typically considered a data protection architecture—backup/restore is the de facto killer app for SANs—QLogic has instead created an extremely effective platform for chip design and simulation, board design and layout, and verification. In other words, QLogic's SAN is a production tool that puts SAN data online and at the disposal of a powerful server farm to handle the most intensive CPU and I/O functions for the company's ASIC DESIGN engineers.

Mark explained, "That SAN was purchased for our production engineering department, which requires 99.99% to 99.999% data availability. Why did we decide to go with a SAN as opposed to NAS or direct-attached storage? It's all the key points you read about SANs: high availability, scalability, performance. But we needed to have multiple servers share, read and write the same data. So our SAN has a meta data controller layer for shared read/write access. This allows all ten of our high speed servers to read and write to all of the partitions. On a traditional SAN, each server is permitted high-speed access only to assigned partitions."

To ensure optimal performance, QLogic's SAN allows three jobs per server, permitting a total of 30 CPU and/or I/O-intensive jobs to run concurrently. This is made possible with load balancing software that queues jobs until it finds the appropriate resource then submits them. Engineers can run simulations, which can take days, and analyze data without tying up desktop work stations, choking CPUs or bandwidth.

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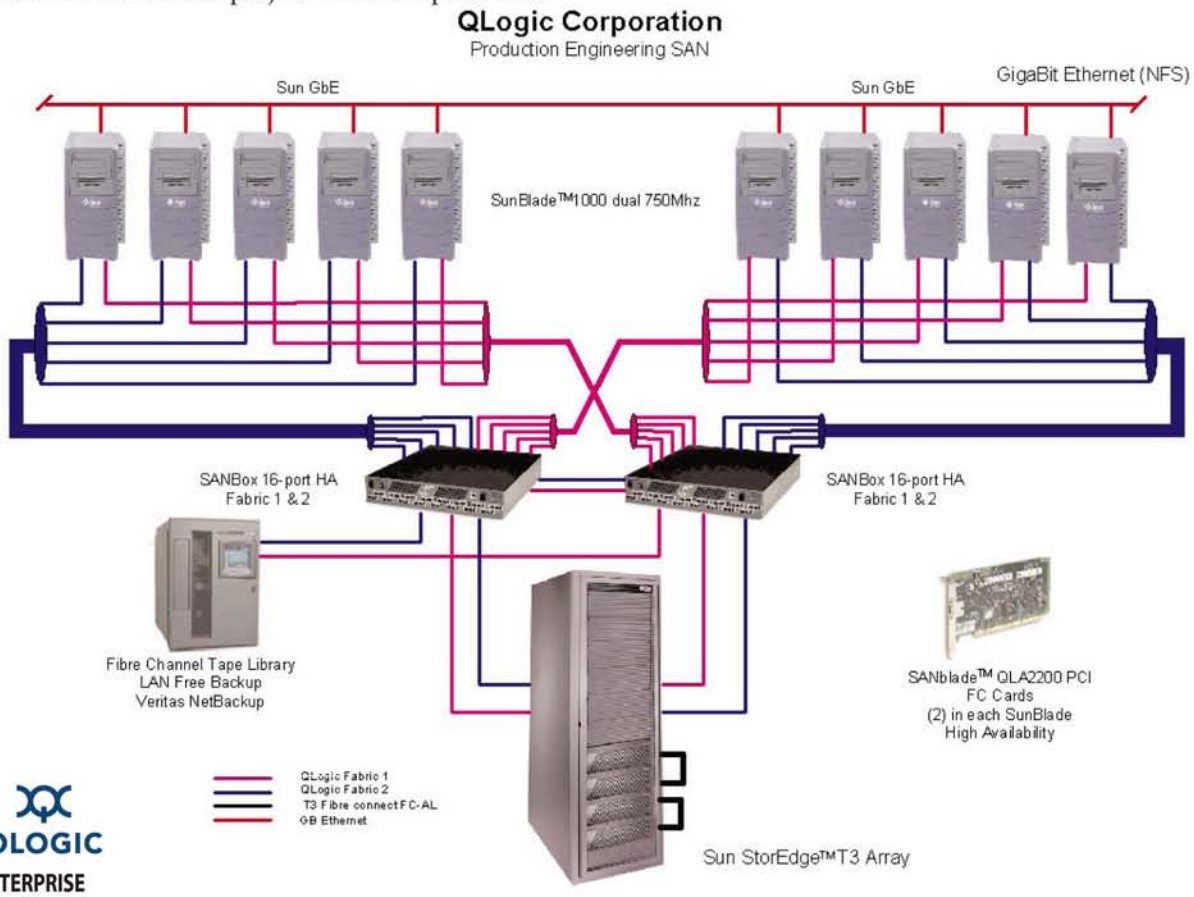
While QLogic's SAN alleviates backup traffic from the client LAN, it also does double duty by providing file services to the engineering team. Each of the ten SunBlade servers run NFS and connect to the LAN via GbE. This allows the entire engineering team high-speed access to stored data. In a NAS environment, all users, from desktop clients to servers on the network, access storage through a single connection.

"Even with GbE, that pipe is still going to clog," stated Mark. "With our solution, each of our ten servers has a GbE network card and can act like a file server. So now traffic to the storage has been alleviated by a factor of ten. And on top of that, only the lowest level users are using that network connection. The servers are FC attached to the SAN, so they don't impact the network. As you add storage users, whether clients or servers, the performance of NAS drops dramatically."

As a SAN provider, QLogic is admittedly different than most SAN end users. The company has a vested interest in showcasing its products in real-life situations. For Mark and the systems users, however, the matter is mission critical. "As our designs grow, our data requirements grow. The ease of scalability in a SAN offers an immense advantage over competing storage architectures. In fact, the production engineering SAN delivers such value to our team that we are currently planning a second, separate fabric to house projects on other platforms."



qlogic Simplify™