Considered one of the world's innovative and forward-thinking grocery chains, Shaw's Supermarkets, Inc., of West Bridgewater, Massachusetts, is the second largest grocery store chain in New England with 185 stores and sales last year reaching $4 billion. Today, Shaw's Supermarkets consists of stores throughout Maine, Massachusetts, New Hampshire, Rhode Island, Connecticut, and Vermont, serving more than 4 million customers each week. Each store has a Caldera UNIX-system-based server to handle Point of Sale (POS) and Electronic Payment System (EPS) transactions.

The Challenge

Shaw's Supermarkets, who already use Caldera Open Server for their POS system controller as well as their Electronic Payment system in the stores, required now to convert their corporate applications from an NCR platform to UnixWare. These applications were using Oracle databases which ranged in size from 100 Gbytes to 500 Gbytes. Key to the solution was the efficient backup of the new servers, especially the Oracle databases which were in constant 24x7 use and critical to the corporate systems.

After reviewing several backup and restore products, Shaw's found that, of those that were capable of backing up their new Caldera system, all of them only did so as an agent over the Local Area Network (LAN) and none could solve their Oracle backup requirement. Testing had already shown that backup over the LAN in this way would be too slow to effectively backup the databases.

Shaw's needed a backup and restore application that could take advantage of the FibreChannel environment supplied by the new Caldera platform, and one that could do hot backups of their Oracle databases while still in use.

Shaw's Shops for Enterprise Backup … Chooses HyperTape for High Performance Direct Backup from Caldera UNIX

The Solution

BridgeHead Software, authors of HyperTape and OpenMedia products, were invited to discuss possible solutions with Shaw's. Shaw's quickly realized that BridgeHead had a different philosophy than the other backup vendors they spoke with. They were prepared to work with their customers to ensure that the backup solution that was implemented matched the customer requirements.
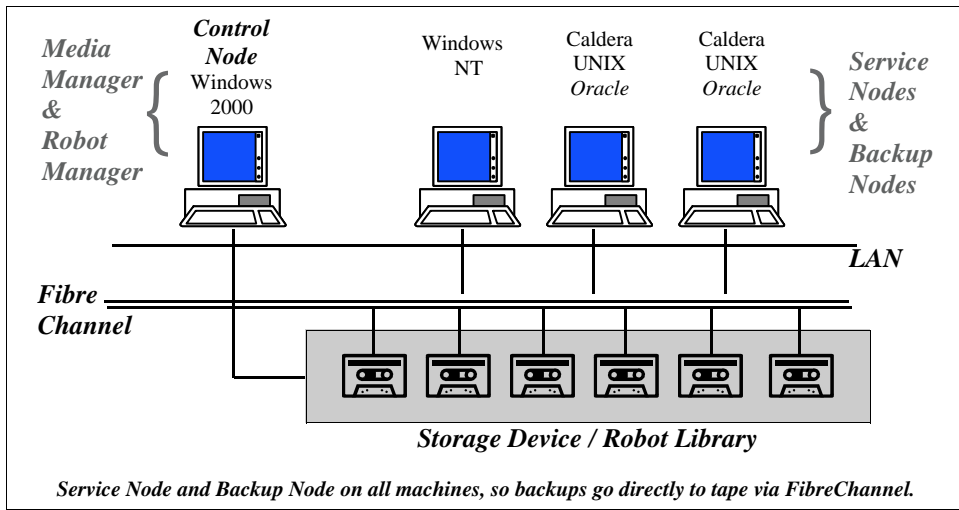
BridgeHead proposed a solution that would overcome the issues that Shaw's was facing. Using BridgeHead's proven HyperTape enterprise backup and restore solution, they would port the HyperTape Backup Node and Oracle agent — which were running on other UNIX and Windows platforms — over to UnixWare. The new system would allow Shaw's to backup directly to tape over the new FibreChannel, providing optimal performance.

"Shaw's wanted to use a proven, enterprise wide, backup and restore product which worked in their environment, and that's exactly what we offered them," said Tony Cotterill, president of BridgeHead Software.

"Because of the modularity of our system, we were able to make amendments to our standard product that exactly matched Shaw's requirements. This also gave us a unique offering for other Caldera users who require backup and restore solutions."

Service Node and Backup Node on all machines, so backups go directly to tape via FibreChannel.

Shaw's requirements are continuing to grow, however, the initial implementation in April, 2002 had the following configuration:

* 2 Caldera production servers
* 2 development servers
* 4 test servers
* 2 NT servers
* SAN
* 2 Tape Libraries each with 80 slots and 4 super DLT drives

With BridgeHead's HyperTape, software backup and restores are made directly from Caldera's UnixWare servers to the tape drives using FibreChannel connectivity. Using the SAN in this way means that the speed of backups are now only limited by the tape drive speed, not the bandwidth of the LAN. Given Super DLT tape speeds of between 11MB/sec (native) and 22MB/sec (compressed), it is unlikely that any backup windows will be exceeded.

The Benefits

"A big advantage of BridgeHead was that it could do hot backups of the Oracle databases in a very efficient and fast manner," said Bob Doane, Director of Technical Services at Shaw's. "Our Oracle databases are in use 24X7, and with HyperTape we never have to bring them down to get a good backup."

The new system running on UnixWare has three defining characteristics that enable Shaw's to remain on top of their industry. First, it is large enough to run multiple applications on multiple platforms. Second, it can be geographically spread out, and it scales from one machine to many thousands of machines. And third, it allows central control of backups and media, while allowing data to be stored locally. Shaw's is currently using the same tape drives on both Caldera and NT machines. HyperTape running on UnixWare ensures that there are no conflicts between the two machines.

"We use the central control of HyperTape to manage our two corporate data centers," said Doane. "We are sharing tape drives on multiple systems via the SAN network. HyperTape is doing the exact job we required of it, and that makes our life much easier as a result."

The Product

BridgeHead Software's HyperTape is an enterprise backup and restore software solution for data, databases, and applications, that provides automatic, unattended backup of PCs, workstations, departmental servers, and enterprise systems across networks or to local tape drives or tape libraries. It is designed for efficient backup to automated high capacity peripheral systems.

HyperTape includes a media management module called OpenMedia, for volume, file, and device management under robotics or operator control. It allows for multi-hosted devices, and will automatically manage the access to SAN devices. HyperTape offers a unique backup technology that can dramatically reduce backup and restore times. In some cases, it can be 10x faster. HyperTape is the solution of choice for today's sophisticated computing landscape.

Caldera's UnixWare® 7 Release 7.1.1 is the newest addition to the UnixWare 7 product line. It is designed to meet the most stringent demands on performance, scalability and availability found in the corporate data center. Supporting multiple levels of redundancy and servers with huge disk and memory capacity, the system brings data center power with significant cost savings over RISC-based UNIX server offerings. It is also designed to meet the performance and 24X7 availability demands of business critical application environments. It delivers superior availability and on-line serviceability, by leveraging the latest innovations in industry-standard technologies such as Hot Plug PCI, Multipath I/O and I2O. It also allows for redundant HBAs, network cards, and real-time management of data on redundant disks and file systems. It ensures that the information critical to your business is dependable, accessible and accurate.

BridgeHead Software

BridgeHead Software, a Caldera independent service provider, is a storage management company focusing on enterprise wide backup/restore, email data management, disaster recovery, and related applications for virtually all platforms. With offices across the UK, Europe and the USA, BridgeHead has a significant customer base throughout the world. BridgeHead also has a growing international distribution network that provides sales, support, training, and consulting services to other major markets worldwide.

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