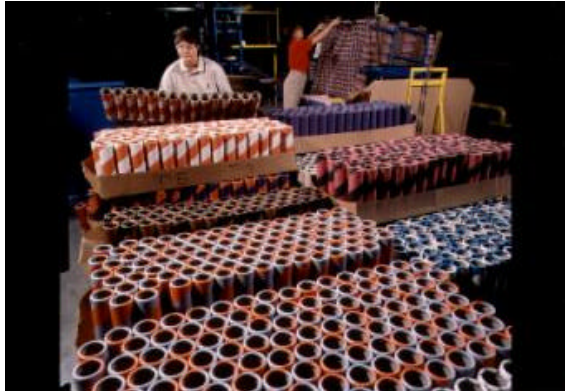# Qualstar Tape Library Systems Rescue Major Corporation's Database Quickly, Inexpensively

The mass of data used and stored by companies today continues to expand exponentially; many firms are already cramming *terabytes* of information onto their backup drives, a number unheard of only a few years back. Meanwhile, worldwide operations and the increasing use of the Internet and intranet create demands on system availability, while shrinking or eliminating time windows available for storing this new data.

Eric Manning, Systems Engineer at Sonoco, headquartered in Hartsville, South Carolina, is quite familiar with these demands. Sonoco is one of the world's largest manufacturers of packaging materials for industrial and consumer markets. In 1997, the company had sales of $2.8 billion. Today, Sonoco businesses employ more than 17,000 people at more than 270 locations on five continents.

"We have about 70 NT servers and 30 Unix servers," says Manning. "We back up almost a terabyte of data, pretty much every week."

Managing speedy yet complete data backups for such a huge multinational organization is challenging, to say the least. In the past, Sonoco utilized an operator who would do manual backups on each server, in a complex, unreliable and inefficient process.

"Previously, all our UNIX and NT servers were backed up to local tape drives. They were all located in the data center, probably about 50 servers at that time," he explains.

"Our backup policy revolved around one operator who would load and switch numerous tapes every night during the week. We were using OS level backups – fbackup for UNIX, Ontape for Informix database backups, Backup Exec for NT backups, etc. As our data center and the number of servers continued to grow, our backups were no longer reliable; we weren't certain if

we were getting a good backup and we were worried about the tapes getting out of sequence. As our databases grew, we had to insert multiple tapes. You can see what a hassle that was," he continues.

Manning held a meeting with Sonoco management, who agreed that the backup situation needed improvement. It was then that they determined to go with a centralized, local backup unit.

"A DLT system was initially considered, because everybody knows it, it's tried, true, supposedly the greatest thing since sliced bread," Manning recounts.

Manning and his group looked at the ATL P1000 with two 7000 DLT tape drives, which was new at the time. "We looked at it and one of their larger systems. We actually tried it, the company sent a technician out, and basically he couldn't get it to work.

"Our sales rep from Quest introduced us to Qualstar," continues Manning. "He came out and gave us a very in-depth understanding about tape libraries and tape mechanisms, and suggested his product, the Qualstar tape library system using AIT technology, which was very new to the storage industry at the time."

Founded in 1983, Qualstar is a leading manufacturer of automated cartridge tape libraries and other tape drives. Its tape storage products are sold worldwide to OEM manufacturers, system integrators and resellers for use with networks, minicomputers, workstations, and personal computers.

"We liked the small footprint of their tape library, which was important for us because we have limited space in the data center…space is always at an optimum," Manning explains. "We were able to tell management, 'Well, it takes up a minimum footprint. We can probably get two in here, and if we need to rack them, we can go ahead and do that.'"

Further investigation revealed that the Qualstar library had 40 tape slots, which was ten more than the ATL P1000. Restoration performance also impressed Manning and his team.

"The restore time was phenomenal as compared to the DLT tapes that we examined. I would say we noticed about a 20-25% difference from the benchmarks that we took. On backups, the AIT drives in the tape library system averaged 27 seconds versus 68 seconds for the DLT. Restore times came in at seven seconds for the AIT versus 45 seconds using the DLT."

Price was the final factor that convinced Manning and Sonoco management that the Qualstar library was the best buy. "The bad thing about DLT is that it's also very costly," he says. "We were looking at one DLT, which was actually $35,000. The Qualstar 4440 was $22,000."

Each of the model 4440 tape libraries that Sonoco purchased handles 42 tapes, for a total native capacity of 1.47 terabytes (using AIT-1 technology), and compressed capacity of 3.8 terabytes. Manning utilizes Legato to coordinate his backup duties.

Manning says he's very pleased with the libraries, which work well with Sonoco's system, save time on backups and money on repairs and maintenance.

"We backup after hours, using Legato software. We have a small backup window and our environment is kind of unique, but Qualstar is able to handle it," he says. "We have three libraries, two with three tape drives and one that has four drives. The one with four drives solely handles our database department. They've handled our back up and our restores very, very well."

Since installing the libraries, Manning claims that they've saved his skin several times when catastrophe struck during an upgrade last summer, when one of his co-workers wanted to backup in the traditional method using the local tape drives.

"I backed up to the Qualstar tape library, which was ten times faster than going out to the local tape drive, and we were able to start our upgrade," Manning continues. "We did not realize how the library was going to save us. My co-worker went ahead and put his tape in the local drive and tried to restore from it. I gave him the OK, he got to the second tape, and guess what

happened? It bombed. I looked at him, he looked at me and said, 'Please tell me that we can possibly restore with Legato on the tape library.'"

By this time it was 6:00 am, and Manning was supposed to have the database backed up by 7:00. "It was getting ready to impact production. I had the CIO and my boss coming through my office and wondering what we were going to do. I said, 'Let's go ahead and see if we can pull the information off the tape libraries.'

"Within 30 minutes, we had restored the complete database, and it was up and running. We could exhale at that point," Manning beams. "That's one of the biggest success stories I've seen with this product. And like I said, it took just 30 minutes to restore, as opposed to two hours with the conventional way that we were using before. I think at that point management said, 'I think we made a good investment.'"

Manning also praises the tape libraries' ease of maintenance and Qualstar's responsiveness to the few problems he's experienced. The AIT tape drives are easy to remove from the libraries, and anyone in Sonoco's IT department can pull them for repairs and maintenance if needed.

"If we have any problem with our tape drives, and we've maybe had one or two minor problems in the past year, Qualstar is very expedient in getting the drive out to us with no aggravation whatsoever," he claims. "We just call them with the model number, and since the libraries are so easy to maintain, it's just popping the drive out and putting another in. We don't need to have anyone come out to do anything for us. We can do it ourselves.

"That's one of the other things that we liked when we were comparing products. With the ALT, they shipped the product out to us and dispatched a technician to try and make it work, but he couldn't. So that in itself told me that if we ever had any problems with the DLT drive, we're going to need somebody to come out here and service it; we can't do it ourselves. So it was an easy decision to go with the Qualstar. It sells for less, is faster, more reliable, easier to maintain, and works well with Legato. I really didn't have any major complaints with it. I know with this I can rest easy."

Manning says Sonoco saved money not only on the purchase price of the tape libraries but also on the countless hours required to manually restore data which would have been lost without them.

"If you actually sat down and quantified how much time we would have lost, how many hours it took to input all the data, how much it would have impacted the business, that's a lot of zeros," he confirms. "I'd say a very large amount of money. That's the importance of the backup equipment. You really don't know how important your backup unit is until you have to restore from it. I would recommend Qualstar to any other of my colleagues that I work with. In fact, I do try to, if I have an opportunity."

For more information about Qualstar tape libraries and other products, contact them at 6709 Independence Ave., Canoga Park, CA 91303, tel. (800) 468-0680, email: sales@qualstar.com; or on the Web at www.qualstar.com.

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