

Customer Application

DES and Slumberland, Inc.



Founded in 1967, Slumberland, Inc., has grown into one of the nation's largest and most respected furniture retailers with 35 stores in the midwest generating revenues in excess of \$100 million.

Slumberland's marketing philosophy is a combination of convenient high profile store locations, name brand merchandise (including La-Z-Boy), high impact advertising and a value-added approach to the customer. This ongoing commitment to customer satisfaction prompted Slumberland to investigate ways to improve the performance of its integrated financial package from GERS which runs on top of Oracle and provides inventory control, point-of-sale, and accounting functions such as the general ledger and accounts receivable and payable.

Improving Customer Service

"Any time you can improve the performance of a sales and inventory database, customer satisfaction can't help but be affected in a positive way," said Mark Lacher, senior systems analyst for Slumberland.

Slumberland's Oracle 6.0 database is 3.5 Gigabytes in size and runs on a Data General Aviiion 9500 with six processors, 768 Megabytes of RAM, and an 18 Gigabyte RAID 5 disk array. The system has 300 log-ins with 125 concurrent users active while one to three batch jobs run simultaneously. "We probably run half

batch and half OLTP during the day, and large batch jobs like inventory and sales reports that aren't needed until the next morning at night.

"We had overall system performance problems," Lacher remembers. "We were running out of CPU, memory, and disk I/O depending on the applications that were running. When we ran batch jobs, our disks would get very busy, which would cause our on-line transactions to really start slowing down. We didn't want to incur the expense of the CPU upgrade, so we started looking for a solution that had faster disk I/O to allow us to process our information faster," Lacher said.

Industry: Retail

RDBMS: Oracle

Application: OLTP, batch,
decision support

Hardware: Data General
Aviiion 9500

DES Products:
Database Excellerator,
Model 800D

Dramatic Oracle Performance Increase

The solution to Slumberland's performance problems was a solid state database accelerator from Database Excelleration Systems™ (DES). By

moving key portions of relational database applications — data and/or indices — onto DES' Database Excellerator™, RDBMS performance on transaction processing and complex queries improves dramatically.

Since loading 550 Megabytes of commonly accessed tables and indices loaded onto the DES system, Lacher said Slumberland's Oracle database performance has improved dramatically. The reason, he said, is as simple as disk I/O transfer rates.

"On our conventional disk systems, we see maybe 60 I/Os per second, and it will be maxed out at 100 percent busy," Lacher said. "When we use the DES system for the same problem, we see 300 to 400 disk I/Os, and the DES system is only 30 percent busy, so there's plenty of headroom for additional performance. We end up having between 30 to 80 percent of our I/Os go through the DES system where our access time is .8 milliseconds.

"The DES cached Database Excellerator provides disk I/O access which is four to 20 times faster than our RAID 5 disk array," Lacher added. "This is extremely important because we run a tremendous amount of batch reports, which soaks up disk I/O. DES allows us to simultaneously run batch reports, OLTP, and decision support queries against our Oracle database while improving overall performance.

"The DES Database Excellerator has

not only improved our Oracle performance, it allows our other disk devices to run more efficiently as well, since the disk cache is not getting flushed out as often," Lacher said. "It is a great addition to our Oracle environment."

Plug and Play

According to Lacher, the installation of the DES system was very straight forward. "It was as simple as plugging it in. We picked out the most heavily used tables and indices and exporting those out of our old Oracle table spaces and installing them on the new Oracle table spaces carried on the DES system," Lacher said. "We saw immediate performance gains on our transaction processing and batch jobs, and we were also able to run many more batch jobs too."

"Because of the effectiveness of the DES system, we started seeing many

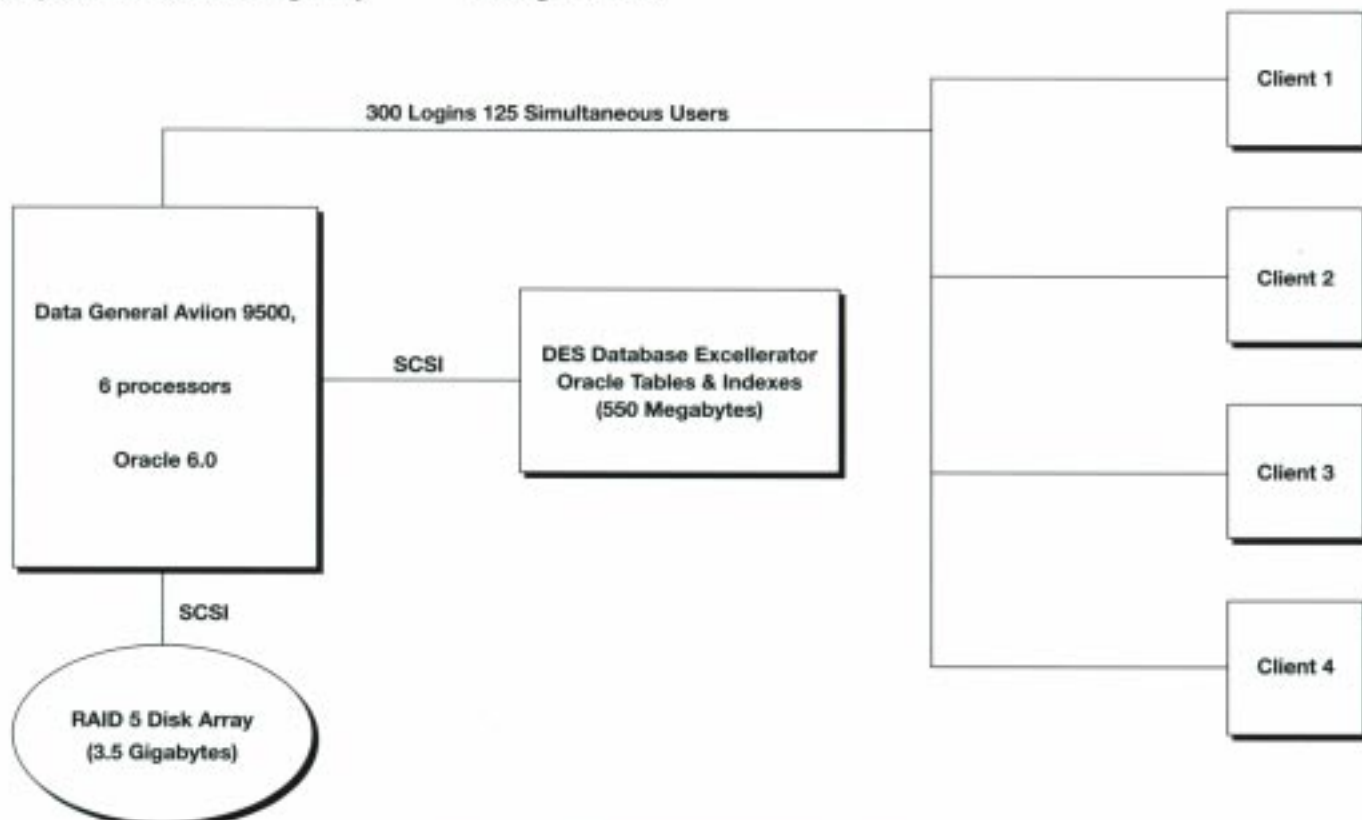
"The DES cached Database Excellerator provides disk I/O which is four to 20 times faster than our RAID 5 disk array."

- Mark Lacher

more bottlenecks in the computer system itself," Lacher added. "Since we originally installed the DES system, our business has grown significantly, resulting in a lot more users on the system running many more batch jobs. Over time, we have upgraded our CPU, added more memory, and upgraded our disks, but the DES system is one of the few products that has survived our upgrade process that began in 1992."

"At the time we bought the DES system, we thought the \$80,000 price tag was a little outrageous," Lacher recalls. "In reality, it has turned out to be a bargain because it has survived while our other systems have come and gone."

"Incorporating the DES Database Excellerator into our Oracle environment has been an excellent investment for Slumberland. We have experienced tremendous performance and functionality improvements with our Oracle database, while keeping the DES product busy only 30 percent of the time, so we have plenty of room to grow. We expect the DES product to outlast three to five generations of computers we will be purchasing in the future."



Snapshot of Slumberland's System Layout.

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