

CHALLENGE	SOLUTION	BENEFIT
Migrate from a proprietary system to an open system to help lower costs while improving reliability and performance	Dell™ PowerEdge™ 8450 server and four PowerEdge 6450 servers running Intel® Pentium® III Xeon™ processors; SAP® R/3® software	Cost savings up to 75 percent for hardware, reduced maintenance and upgrade costs, excellent reliability, reduced response times, higher productivity for developers

Driving the open road

Migrating business-critical SAP applications from proprietary platforms to Dell servers brings PQ Corporation cost savings and greater productivity

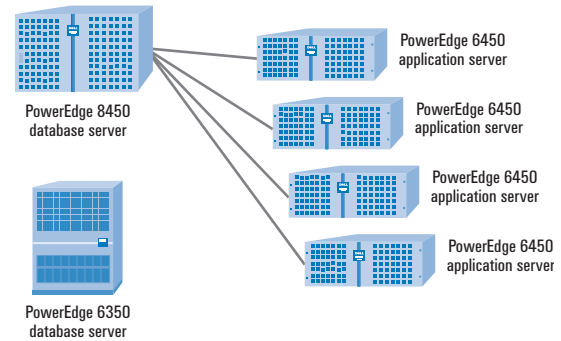
As you drive down the highway, a beautiful red sunset disappears into the horizon. Daylight turns to dusk and the evening quickly transforms to darkness. As you continue rolling along the highway, the stripes on the road reflect as your headlights shine on the pavement. Chances are some components of those reflections come from PQ Corporation.

Founded in 1831 as a soap and candle business, PQ Corporation today is one of the world's largest volume producers of soluble silicates and solid glass spheres used in detergents, construction, agriculture, highway safety, transportation, pulp and paper, and food and beverages. The company currently has 65 inorganic chemical and glass bead plants in 19 countries worldwide.

To manage its myriad products and markets around the world, PQ runs SAP® R/3® release 4.5B to handle its enterprise resource planning (ERP) functions. SAP applications used by PQ include order entry, financial applications, production planning, materials management, inventory, payroll, plant maintenance, quality management, and other bread-and-butter applications. "SAP is an absolutely critical platform for us," explains Rick Fabrizio, director of information technology and chief information officer for PQ Corporation.

PQ hits a bump in the road

In 1996, PQ chose not only to move its 30 different business systems to SAP, but also to run SAP on a proprietary platform. Through the years PQ upgraded its servers, operating system, database (Oracle), and SAP applications until the database server



PQ Corporation uses SAP R/3 applications running on Dell PowerEdge servers for improved performance, reliability, and productivity

finally ran out of growing room. "Reliability began to suffer and the server was becoming unstable," Fabrizio says. "Response time was slipping, and our development system would take hours or days to complete simple testing."

"Our IT staff was putting band-aids on everything—and burning up a lot of non-productive time. We were not able to support the business units with new capabilities because of server constraints," adds David Ritts, manager for systems administration and support at PQ.

Proprietary system loses its glow

PQ had reached the end of the line for its proprietary server; the next step was to purchase a whole new server—with an enormous price tag. "Because they're not based on industry standards,

proprietary hardware has a very high price/performance ratio,” Fabrizio says. “They’re not only expensive to buy, but expensive specialists must perform installations and upgrades, and parts are expensive as well. We saw an opportunity to get out of that cycle.”

PQ had previously standardized on Dell™ desktop computers (about 800 companywide). They were impressed with Dell’s price/performance, quality, and responsiveness. PQ had also standardized on Dell servers for its non-SAP machines that were used for e-mail, file and print, and data warehousing (about 75 systems throughout the company).

Fabrizio’s staff was comfortable with Dell’s competence in enterprise computing and knew that Microsoft® Windows® 2000 Advanced Server was a proven, stable operating system platform. They also believed a Dell-Microsoft solution would provide PQ with a much lower total cost of ownership (TCO). “Our own staff can maintain Dell servers and provide support and maintenance,” Ritts says. “Plus, we don’t have to bring in system specialists when maintenance is required.”

Dell servers illuminate path to savings

PQ took advantage of the low cost of Dell servers and purchased four Dell PowerEdge™ 6450¹ servers to replace its two previous servers. “Even doubling the number of servers, the price of the Dell equipment was significantly less expensive than the proprietary hardware,” according to Fabrizio.

A snapshot of the new system includes several Dell servers:

- » **Database server.** Dell PowerEdge 8450 server with six Intel® Pentium® III Xeon™ processors running at 550 MHz with 2 MB L2 cache on each CPU. The server has 4 GB RAM and is connected to 500 GB of EMC® Symmetrix® external storage (PQ has 150 GB of this allocated to production). This server runs Windows 2000 Advanced Server, the Oracle8i™ database (version 1.6), and SAP R/3 version 4.5B.
- » **Application servers.** Four Dell PowerEdge 6450 servers, each with four Intel Pentium III Xeon processors running at 550 MHz with 2 MB L2 cache. These servers each have 2 GB RAM and run the Windows 2000 Advanced Server operating system and SAP applications.
- » **Development server.** A Dell PowerEdge 6350¹ server with two Intel Pentium III Xeon processors serves as a development server.
- » **Payroll server.** A Dell PowerEdge 6450 server runs the SAP payroll application independently.

Dell Technology Consulting guided PQ through its standard SAP sizing template. This process helped to identify the appropriate Dell

servers needed for the job—and provided enough space to grow. The Dell team also helped PQ size, configure, and tune SAP to the new platform.

Reflections on performance, reliability, productivity

The new Dell and Microsoft platform has significantly driven down the total cost of ownership for PQ. But even more importantly, this open platform has provided high availability for the company’s business-critical SAP applications. “The Dell PowerEdge 8450 has been very stable since we migrated almost a year ago,” Ritts says. “In the first 14 months after we migrated, we have not needed to reboot the server. It’s been up and stable around the clock, without a single unplanned downtime event caused by the hardware or operating system.”

Response times have decreased considerably: the previous proprietary database server averaged 1.19 second response times, and the Dell system delivers an average 0.37 second response. “This type of response time makes our 600 SAP users more productive,” Fabrizio says, “which has a ripple effect throughout the organization.”

The Dell platforms also make the IT staff more productive. “Previously our staff burned up lots of time patching servers, rebooting failed machines, and trying to stay one step ahead of the next crisis,” Fabrizio says. “The Dell servers just run—there are no problems. That kind of no-hassle operation not only generates great peace of mind, but it also allows our administrative people to focus on more strategic issues.”

Ritts adds that developer productivity has also received a boost from the new Dell platforms. “The proprietary servers were extremely difficult to work with,” he says. “Transactions that would take a few seconds to run in production would take hours or days in testing. We couldn’t put more than five people on a server. When we swapped in Dell servers, we saw a substantial increase in performance, which boosts developer productivity.”

PQ is moving more business-critical applications to Dell servers as older servers come up for replacement. “It’s a no-brainer business decision,” Fabrizio says. “Moving from proprietary machines to industry-standard Dell and Microsoft platforms is the only way to go.” ☞

FOR MORE INFORMATION

<http://www.dell.com/servers>

<http://www.intel.com/xeon>

¹ Newer models are available at <http://www.dell.com>.