

CHALLENGE	SOLUTION	BENEFIT
Install a server platform that can process large files quickly to make employees more productive; increase storage capacity; improve performance of a J.D. Edwards™ enterprise resource planning (ERP) application; and reduce IT management costs	Deploy a storage area network (SAN) based on the Dell EMC FC4700-2 connected to an Intel® Pentium® III Xeon™ processor-based Dell™ PowerEdge™ 6450 server; two Intel Pentium III processor-based PowerEdge 2450 servers; an Intel Xeon processor-based PowerEdge 2650; and a Dell PowerVault™ 650F for backup and restore	A high-performance storage infrastructure, faster ERP compilation speeds, increased server reliability and responsiveness, simplified management through a 30 percent reduction in hardware, and reduced administrative overhead

A blueprint for great performance at a low cost

Dell PowerEdge servers and a Dell | EMC SAN helped Dewberry maximize productivity and decrease IT costs

In the world of engineering, organizations need to think “big” in virtually every area of business. Whether a company specializes in building engineering, land development, water resources, or other large-scale projects, it requires an IT infrastructure that can handle the massive data files and demanding applications that engineers use every day.

Dewberry, a U.S. engineering and architectural consulting firm, discovered that its existing hardware was overwhelmed. The organization used intensive computer-aided design (CAD) applications and databases with graphical components—but did not have the high-performance servers to run these applications at top speed. Another headache: Dewberry distributed its storage systems among several departments, complicating storage administration and data accessibility.

As data storage grows, so does complexity

According to Henry Tyler, corporate technology director at Dewberry, the company relies on large files for almost all of the work it does. “Because we specialize in graphically intensive work such as geospatial databases and maps, the size of our files has

grown exponentially over the last couple of years,” Tyler says. For example, database files for flood plain analysis can contain detailed graphic representations of land, rainfall data, and terrain modeling characteristics.

Scattered storage systems further contributed to Dewberry’s overburdened IT infrastructure, creating a mountain of management hassles and high overhead. “Because we distributed our storage servers among different departments, we essentially needed to manage each server separately,” Tyler says. “We literally had 12 to



15 different departments managing their own environments.” This complexity drove IT staff members toward more administrative responsibilities, reducing the time they could spend on work that adds value to the company—or generates revenue for Dewberry.

Dewberry recognizes a proprietary predicament

In addition to the need to house growing data, Dewberry recognized that its existing financial management applications were underperforming. “Our applications were old, and we felt that some of our software vendors were headed down a strategically unreliable path,” Tyler says. Moreover, the applications could not integrate with each other unless Dewberry created a significant amount of custom code. “We had been using many different proprietary applications for financial and project management, and had to write different interfaces for the programs to communicate.” The company sought a more integrated ERP system and, after evaluating solutions from various vendors, chose J.D. Edwards.

Dewberry looks to its history with Dell

Having identified the core challenges in its IT infrastructure, Dewberry looked for a hardware solution on which to consolidate storage and run the new ERP application. On the server side, Tyler knew that he needed high-performance servers that could process the company’s files without lagging. For storage, Tyler decided a SAN would best accommodate Dewberry’s increasing data and reduce IT management costs. “Because our data files grow constantly, we really needed a storage solution that offers both performance and scalability,” Tyler says.

Ultimately, Tyler selected Dell because of Dewberry’s previous successes with Dell hardware. “We knew we would use Dell servers because we have used them for years and attained consistently high levels of performance and reliability. We had so much confidence in Dell servers that the natural choice was to also turn to Dell for a SAN.”

Dewberry deployed a SAN based on the Dell|EMC FC4700-2 enterprise storage platform connected to an Intel Pentium III Xeon processor-based Dell PowerEdge 6450 server, two Intel Pentium III processor-based PowerEdge 2450 servers, and an Intel Xeon processor-based PowerEdge 2650 server. The PowerEdge 6450 runs Microsoft® SQL Server and the J.D. Edwards application server. One PowerEdge 2450 server acts as a deployment server, and the other PowerEdge 2450 acts as a Web server running J.D. Edwards applications and Microsoft Internet Information Services (IIS). Finally, the PowerEdge 2650 acts as a second Web server.

A SAN simplifies management, reduces IT costs

“The SAN has enabled us to manage our storage infrastructure with far fewer people because we have less equipment to manage,”

Tyler says. “We now require only two people to manage the consolidated environment, so the rest of the IT staff can focus on billable projects.” These additional billable hours per person translate into greater overall productivity for the company and contribute to higher revenues.

Dewberry also integrated the Dell PowerVault 650F into the SAN for routine data backups and data restores in the event of an unplanned outage. “Because we have consolidated our data, backup and restore routines are fast and easy,” Tyler says. Traffic now stays within the SAN, eliminating gridlock over the local area network (LAN).

Dewberry speeds compilation with Dell servers

After choosing J.D. Edwards as its ERP application, Dewberry designated fast processing as the top priority for the servers that would run the system. “When we make significant changes to the ERP application, we need to recompile the entire product for the clients and servers, which can be quite time-consuming if we don’t have high-performing servers,” Tyler says.

Since deploying Dell PowerEdge servers to run the J.D. Edwards application, Dewberry has dramatically increased its compilation speeds. “After witnessing how fast our compilations were, our consultants remarked that these speeds were some of the fastest that they had ever seen.”

Dewberry also has gained higher availability by deploying J.D. Edwards in a multitiered configuration, distributing the application to different servers. During business hours, Dewberry can allocate the resources of one server to recompilation while the remaining servers provide other services to the organization.

Dell engineers a successful future for Dewberry

Dell has helped Dewberry manage its increasing data storage and ERP needs in a cost-effective way. “Because of the high performance of Dell hardware, our equipment is much more reliable and more responsive to end-user needs than it was before,” Tyler says. “The Dell SAN has been instrumental in reducing our IT overhead. Now we are managing more data with fewer IT personnel, which has enabled us to save tremendously—a significant accomplishment in today’s economy.”

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September 2003

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