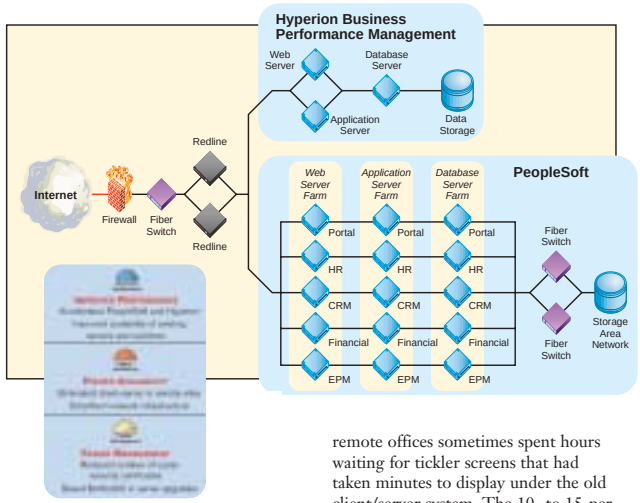
Charting a Web Course

Redline Networks helps medical records management firm ChartOne cure network pains and boost the business case for its Web-enabled ERP applications.

No IT executive looks forward to asking upper management to spend $200,000 on a major system upgrade. But Henry Svendblad, director of IT at ChartOne, Inc., felt he had little choice. ChartOne sells technology and services that help health care institutions easily and cost-effectively access and manage patient records. To better serve its customers, which represent 20% of hospitals in the U.S., and to ease the burden on its own IT staff, the company wanted to migrate its ERP applications to the Web.

Like many companies transitioning to Web-based applications, ChartOne hit performance snags that no amount of application tuning and new hardware could cure. Only after two years of trial and error did ChartOne find a cure in Redline Networks, which makes a family of appliances that deliver a broad set of capabilities to ease the network burdens and boost the business case for Web-enabled applications. With Redline's E|X 3250 enterprise application processor handling I/O processing, connection management, compression, load balancing and SSL processing, ChartOne customers and employees now experience the performance they require-and the company's IT group is realizing the administrative benefits that Web-enabled applications can bring.



ChartOne's Challenges

- Web-enabled enterprise applications were overloading servers.
- Server processors were at 80% to 90% utilization during peak periods.
- Slow response time hurting user productivity.

The Redline Networks Cure

- Average server CPU utilization during peak usage now 10% to 15%.
- Response time returned to desirable levels for local and remote users.
- Remote sites no longer need terminal servers.
- Bandwidth consumption decreased 70%.
- Savings of $200,000 by avoiding major hardware upgrades.

On the Web Trail

ChartOne's odyssey began in July 2001, when the company began migrating its homegrown client/server enterprise applications to PeopleSoft 8, a Web-based ERP suite. "We were expecting growth of 20% to 30% a year," Svendblad says. Thin, standardized browsers would require far less IT support than fat, homegrown clients.

Webification proved to have its challenges. As more application modules and users moved onto the new infrastructure, response times slowed to a crawl. Employees at the company's 10 remote offices sometimes spent hours waiting for tickler screens that had taken minutes to display under the old client/server system. The 10- to 15-person offices had plenty of bandwidth, IT staffers knew: In anticipation of the migration to PeopleSoft 8, they had deployed T1 links to each site.

Users on the corporate LAN were also having difficulties. By far, the worst off was the accounts receivable department, which processes 300,000 transactions per month. Productivity had dropped by 20% because of response time degradation. "During peak usage periods, it took people minutes to go from screen to screen," Svendblad says.

In Search of a Cure

As user complaints mounted, the IT staff began looking for remedies. PeopleSoft and Oracle-ChartOne's application vendors-suggested fine-tuning their applications. "With a thin Web client, ERP systems involve complex querying in the background," Svendblad explains.

When tweaking back-end software produced little improvement, ChartOne tried upgrading its server hardware and storage. "Performance improved slightly, but we were still looking at CPU usage in the high 80% to 90% range during peak processing time," Svendblad says. "Our phones were ringing off the hook."

Pressed for answers, ChartOne even took the radical step of supplying remote offices and home workers with terminal servers, which substantially improved response time. "It was like we'd gone back to a client/server setup," Svendblad says, noting the setup also strained budgets and IT resources.

Meanwhile, Web and application servers were maxing out during peak usage periods. A major upgrade seemed inevitable. "It looked like we needed a new [BEA Systems] WebLogic server, a new database server and a third server for finance," Svendblad says. The total budget hit would be $200,000.

One Very Brief Pilot

Just as he was about to swallow that bitter pill, a former colleague told Svendblad about Redline Networks, and its family of appliances that help enterprises manage the network impact of Web-enabled applications.

In summer 2003, ChartOne deployed Redline's E|X 3250 enterprise application processor in front of its WebLogic servers. The Redline device took over complex scheduling of TCP requests and connection management chores for as many as 150 users, saving the Web servers' CPU and memory resources for other activities like page generation. The E|X also performed data compression to speed up server response and conserve bandwidth.

Svendblad's group started with a pilot in the accounts receivable group. Setting up users was simple and transparent, Svendblad reports: "We didn't have to change anything on our existing architecture, or on the WebLogic or PeopleSoft servers."

User response was fast and dramatic. "People asked us if we had put some magic juice in their system," Svendblad reports. When word spread, users not involved in the pilot "were pounding on our door saying, 'Whatever you did for her, do for me!'" It may have been the shortest pilot on record: A day after the test started, the company routed all the other users through the Redline box.

After ChartOne installed the Redline Networks E|X 3250, user response was dramatically faster. "People were asking us if we'd put some magic juice in their system," says Henry Svendblad, director of IT.

Tallying the Benefits

Once most of the users were online, the benefits of the Redline device really began to kick in. Average CPU consumption during peak processing time plummeted from 80% to 15%. Bandwidth consumption decreased 70%.

The E|X 3250 handles SSL encryption, as well. "We have security without burdening our servers with managing certificates or with SSL," Svendblad says.

Over the past year, ChartOne brought its CRM, HR and Hyperion Business Performance Management applications behind the Redline appliance. Most recently, the company added its View Manager: Chart Management Suite of ASP offerings to the applications front-ended by the E|X platform.

The bottom line: ChartOne successfully implemented a Web-enabled ERP platform with a "single box solution" that addresses critical Web tier issues while dramatically improving the business case by increasing user productivity and avoiding costly hardware upgrades. Users experience the same response times as with customized fat clients, but IT no longer has the support burden. Says Svendblad: "I think that's pretty impressive."