An Appointment with

Availabili

Leading dental application service provider Dentalxchange gets a pain-free
infrastructure upgrade for around-the-clock customer satisfaction

Picture a dentist's office—the chair, the X-rays, the pointy metal implements. What's not immediately obvious is the hidden engine that helps dentists manage and market their practices.

More than 19,000 dentists use Web-based software offered by Dentalxchange, the leading application service provider (ASP) for the $60 billion dental industry. The company's Web site, www.dentalxchange.com, is the most trafficked commercial dental site on the Internet, with more than 2.5 million monthly hits and 130,000 monthly user sessions. Through the site, dentists can access applications for practice management and insurance claims processing, buy dental supplies, and participate in online learning programs.

Aging system needs polish

Dentalxchange began as a simple bulletin board for the dental community. In 1996, the company debuted its first Web presence with portal services, including site development and hosting for dental offices. But as the business grew, Dentalxchange began to worry about its IT infrastructure. Servers were crashing frequently because of ailing fans and power supplies. The threat of site outages loomed—customers could lose access to critical applications and content.

No longer could the company scrape by on its old infrastructure. Dentalxchange was expanding into new areas that would both dramatically increase site traffic and make 24×7 availability even more imperative. "Our new insurance business can generate 300 million claims a year across our site," explains Brian Davidson, manager of information services at Dentalxchange. "Also, with our new ASP model, if one server goes down, 1,000 dental practices go with it. We need a server infrastructure designed for as close to 100 percent availability and uptime as possible."

DENTALXCHANGE

» CHALLENGE Beef up server infrastructure to minimize the possibility of site outages and provide room to grow with the business

» SOLUTION Intel® Xeon™ processor-based Dell enterprise infrastructure: Dell PowerEdge 1550 servers running a load-balancing application and Dell PowerEdge 6450 database servers with Dell PowerVault 210S storage systems

» BENEFIT 24×7 availability with 100 percent redundant failover, easy scalability to handle millions of visitors, and lower ownership costs

Customer Spotlight

New infrastructure fills the gaps

"We didn't want to entrust a growing business to inferior hardware," says Davidson. So Dentalxchange replaced its old server vendor and turned its entire IT infrastructure over to Dell. After considering the company's requirements, Dell recommended an Intel® Xeon™ processor-based, three-tier infrastructure that centered around the Dell™ PowerEdge™ 1550 server running a load-balancing application. A load-balanced server would give Dentalxchange the high availability it needed, as well as the means to scale its infrastructure as business grew.

Dentalxchange implemented a new design where the load-balanced servers allocate Web traffic and applications among Dell PowerEdge 1550 Web servers installed in the

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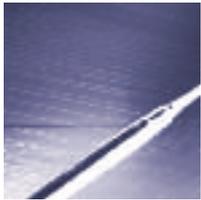
company's two data centers. For the back-end database, Dentalxchange chose clustered Dell PowerEdge 6450 servers with Dell PowerVault™ 210S storage units. The database is replicated, so if an outage occurred at one data center, traffic would be shifted automatically to the other data center.

Quality care results in a healthy system

Besides amply meeting the company's scalability and reliability goals, "Dell has fantastic quality," Davidson says. "The gear rarely lets us down." He also likes the tools-free access of Dell rack-mount servers and storage systems, which lets Dentalxchange staff quickly and easily service servers, add storage, and bring servers in and out of the pool.

"Dell's incredible support was another factor," Davidson continues. "With our prior server vendor, if a part went out on our old equipment, we waited a couple of days—which would prove catastrophic to our business." Dentalxchange uses Dell Premier Enterprise Support. Once, Davidson needed a replacement drive for a Dell tape library. His staff called for support, and within 50 minutes the replacement part arrived. Fifteen minutes later, a Dell technician showed up to install it. "Server downtime costs us a lot of money," Davidson says. "Prompt service and support are absolutely critical in keeping our business up and our customers happy."

High availability keeps the revenue flowing

With a rock-solid Dell infrastructure—powered by Intel Xeon processors—Dentalxchange began rolling out new services. First was PracticeConnect, a Web-based service that relieves dental offices of running, managing, upgrading, and backing up their own practice management applications. For a monthly fee, offices can use PracticeConnect to handle appointments, billing, insurance information, patient history storage, procurement, staffing, and other functions.

"This is a high-availability product, requiring five-nines uptime," Davidson notes. "If our system should go down, hundreds or
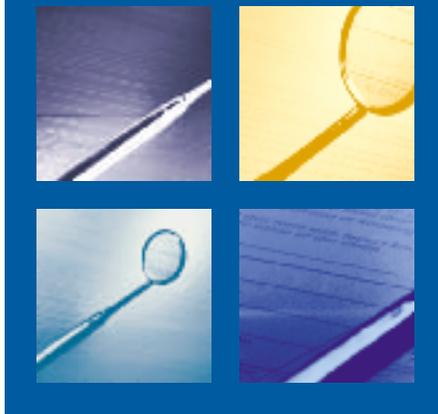
thousands of dental practices would go down with it." The Dell servers running a load-balancing application are designed to help Dentalxchange achieve 100 percent uptime for around-the-clock customer satisfaction—and uninterrupted revenues for Dentalxchange.

Part of the high availability comes from the Dell Remote Access Card. Tucked inside every server, this card lets Dentalxchange monitor critical server components and catch small problems before they become catastrophes. It proactively sends an alert if a fan, power supply, or processor is overheating so Dentalxchange can replace the part before it fails. Even if the operating system crashes, Davidson's staff can reboot the server remotely.

Scalability insures easy growth

An even more exciting opportunity is the company's new ClaimConnect service. It lets dental practices check patient eligibility and submit insurance claims online, free of charge. Essentially, the goal is to build a dental portal for insurance companies, allowing dentists to submit claims for all patients, no matter which insurance carrier they have.

Dentists traditionally mail or fax paper forms to the insurance company and then wait two weeks just to get a confirmation. But by using ClaimConnect, a dental office can submit the claim instantly through the Web. According to Dentalxchange, the online process will cut two weeks out of the revenue-critical insurance claims process and slash processing costs from approximately $3 to $0.15 per claim for the insurance company.

ClaimConnect could generate a tremendous amount of traffic, states Davidson. For example, insurance giant MetLife offers the service through its own dental provider portal. "MetLife has contact with virtually all 110,000 dental offices in the U.S.," Davidson explains. "We could find ourselves processing 300 million transactions per year and moving 5 terabytes of data through our servers. The Dell infrastructure gives us plenty of flexibility and room to meet this kind of growth."

Should traffic jump from 120,000 users a day (today's average load) to a million a day, Dentalxchange can simply add more load-balancing appliances and PowerEdge 1550 servers to the pool. "Deployment is a piece of cake," Davidson says. "With the load-balancing server, bringing a server in and out of the pool takes virtually no time at all. The servers are extremely easy to configure."

Added savings cap a sweet deal

The Intel Xeon processor-based Dell infrastructure has given Dentalxchange very high availability and long-term scalability, which were the original objectives. But it has also saved the company money. "The Dell equipment costs less than comparable servers we had before," Davidson says. "We're deploying best-of-breed solutions that exceed all of our expectations and saving thousands of dollars in the process. We measure the return on this investment in terms of guaranteed uptime and scalability into the future as far as we can see." ▮