

# PACIFIC DENTAL SERVICE

## STEELCENTRAL PAID FOR ITSELF AFTER FIRST USE BY IDENTIFYING A RANDOM NETWORK PROBLEM

### IN BRIEF

#### Industry

- Pharmaceutical/Health Care

#### Challenges

- Large network (6,000 PCs, 500 servers) spread over six states
- 100% digital dental offices can't function normally when network is down
- Severe financial consequences for downtime

#### Solution

- Riverbed® SteelCentral™ NetProfiler application-aware network performance management
- Riverbed® SteelCentral™ NetShark full packet trace functionality
- Riverbed® SteelCentral™ Packet Analyzer packet and transaction analysis software

#### Benefits

- Re-occurring elusive problem causing office disruptions and loss of revenue was identified within minutes of SteelCentral installation
- Problems that used to take 4-8 hours are now fixed in minutes
- Less IT travel, lower IT management costs

Pacific Dental Services is one of the nation's leading dental service organizations. The company provides human resources, daily operations, billing and collections, IT, and other office support services for nearly 250 dental practices in six states, allowing dentists to focus their efforts on providing the highest levels of cost-effective patient care, or "letting dentists be dentists," as the company's motto proclaims.

## CHALLENGE: DENTISTS ARE LESS PRODUCTIVE WHEN THE NETWORK IS DOWN

According to Jason Irby, network administrator at Pacific Dental Services, the company faced a tremendous challenge in monitoring its large and complex network, which supports more than 6,000 PCs, 500 servers, and 12,000 network connections spread throughout the western United States and Texas. "Every dental office is 100% digital," Irby explains. "Patient charts, scheduling, x-rays—it's all digital. So when there's a problem with the network, the affected offices can't function normally until the problem is resolved."

Network performance problems used to cost the IT staff at Pacific Dental Services tremendous amounts of time and money, as they often had to travel onsite to monitor an issue and implement a fix. "We would have instances where we heard reports about performance problems on the network, or with applications, that affected day-to-day operations, but we couldn't tell what was causing them," says Irby. "We could have continued to throw people at the issues, but we preferred to use a tool to fix problems without having to expand our staff."



**PACIFIC**  
DENTAL SERVICES®

## SOLUTION: APPLICATION-AWARE NETWORK PERFORMANCE MANAGEMENT WITH FULL PACKET CAPTURE

To gain greater visibility into the network and be able to identify problems before they affect the dental offices, Pacific Dental Services implemented three products from Riverbed Technology: SteelCentral NetProfiler application-aware network performance management, the SteelCentral NetShark packet capture appliance, and SteelCentral Packet Analyzer packet and transaction analysis software.

"We have seen and used many products," Irby says. "When we learned about SteelCentral, I thought, 'If it really works the way they say, this is our silver bullet. This is what we need.'" The "silver bullet" functionality that SteelCentral provides is a full view of the network that indicates where problems are, along with the ability to zoom into detailed data to find the specific causes of those problems. NetProfiler has become the IT staff's first stop when they hear about a problem, and Irby estimates that about 95% of the time, NetProfiler is all they need to quickly identify and resolve the issue.

NetShark and Packet Analyzer come into play the other 5% of the time, which is typically when Irby has learned—via the NetProfiler analytics functionality—about a trend or a minor performance issue that he wants to investigate more thoroughly using a full packet trace. He offers the example of a high retransmit rate between certain hosts. "NetShark and Packet Analyzer support me in situations like this where I want to investigate a problem in a lab-type environment," he explains.

The NetShark and Packet Analyzer products provide continuous, line-rate traffic recording at 1G and 10G speeds without packet drops, and can open multi-terabyte network recordings in seconds. Another feature Irby values is Packet Analyzer's intuitive, visual interface which includes a broad selection of interactive views and reports. "I like being able to manipulate the information in the graphical user interface, and also being able to apply some filters and narrow down that somewhat obtuse pile of data," Irby notes.

## BENEFITS: HUNDREDS OF HOURS OF DOWNTIME AVOIDED

The SteelCentral solution more than paid for itself in its first use, according to Irby, by solving a problem that had been "a thorn in the side of the IT department for a couple of years." As he explains, "The problem was hitting us at 2-6 locations every other day, all year long, and it was random, at a different site each time. When the problem occurred, bandwidth at the affected offices dropped so dramatically that those offices couldn't function normally for a period of between 1-3 hours. Even with the 20 people we had on the IT staff at that time, it was impossible to get somebody on-site when the problem occurred." The downtime caused by this one problem caused Pacific Dental Services to lose revenue.

Using SteelCentral Profiler, Irby identified the cause of the problem in minutes. "We could immediately see which hosts were speaking to which servers and on what ports, and see that the problem was being caused by laptops attempting to update their anti-virus software." As Irby explains, Pacific Dental Services has a specialty team that travels from site to site with their laptops. Every time the team arrived at a new site and connected their laptops, they would begin downloading hundreds of megabytes of information from the anti-virus servers, severely compromising bandwidth. Because the laptops had already reached critical storage capacity, the anti-virus update would eventually fail after a few hours, and performance at that office would return to normal. "It was the team's travel that introduced the randomness," Irby says. "The only way we could have found that was with SteelCentral, so it's fair to say the SteelCentral has saved and is saving us hundreds of hours of potential downtime."

"Riverbed SteelCentral is an important part of our success. Without Riverbed SteelCentral, we wouldn't be where we are today."

- Jason Irby, Network Administrator at Pacific Dental Services

Not all uses of SteelCentral are that dramatic but all are critical to the performance of the Pacific Dental Services network. Typically SteelCentral enables Irby and his team to identify in seconds problems that used to take 4-8 hours to find and fix. "Instead of having a four- to eight-hour issue, or worse, a phantom issue that we couldn't identify, SteelCentral helps us identify issues in seconds and fix them in minutes," continues Irby. "And at times, we're tipped off in advance about a potential problem, and we can fix it before it affects any dental offices."

Pacific Dental Services' comprehensive SteelCentral solution has enabled the company to reduce IT management costs. "With SteelCentral, we can manage more IT resources with less staff," says Irby. "In addition, the team is usually able to fix problems without going to the site, so travel costs are down as well."

Pacific Dental Services is a very successful company, with more than 1 million online patient registrations—something that is currently unmatched in the industry. Much of this success is due to the fact that the company has set up a repeatable IT environment in all of its affiliated offices that supports 100% digital dental office operations. "Riverbed SteelCentral is an important part of our success," Irby concludes. "Without Riverbed SteelCentral, we wouldn't be where we are today."

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## SUMMARY

Pacific Dental Services' wide area network supports 6,000 PCs, 500 servers and 12,000 network connections spread throughout the western United States and Texas. When a network problem takes one or more of the company's nearly 250 all-digital dental practices offline, the dentists and staff at those offices can't function normally until the problem is resolved. The company's IT team uses the SteelCentral NetProfiler application-aware network performance management solution, the SteelCentral NetShark packet capture appliance, and

Packet Analyzer packet and transaction analysis software to quickly identify and resolve problems, preventing the loss of revenue caused by downtime. In its first use, SteelCentral identified a problem that had been costing the company a significant amount of lost revenue and time. Typically, SteelCentral turns what were previously 4-8 hour problems into issues that are identified in seconds and resolved in minutes. The IT staff can do more work with fewer people, and now travels less to the individual dental offices, reducing IT costs.

## ABOUT RIVERBED

Riverbed Technology, Inc., at more than \$1 billion in annual revenue, is the leader in Application Performance Infrastructure, delivering the most complete platform for location-independent computing. Location-independent computing turns location and distance into a competitive advantage by allowing IT to have the flexibility to host applications and data in the most optimal locations while ensuring applications perform as expected, data is always available when needed, and performance issues are detected and fixed before end users notice. Riverbed's 25,000+ customers include 97% of the *Fortune* 100 and 97% of the *Forbes* Global 100. Learn more at [www.riverbed.com](http://www.riverbed.com).