

## Western Washington Oncology Olympia, Washington

**Oncology center deploys Packeteer's PacketShaper® to ensure efficient, reliable performance of EMR application, manage bandwidth, and maintain a high quality of patient care**

Craig Wyzik, IT manager for Western Washington Oncology, recalls all too well the time when the Olympia, Washington-based cancer treatment center began implementing an electronic medical record system from IMPAC Medical Systems. The EMR system is designed to improve the center's quality of care, but its implementation exposed serious issues involving application performance over the wide-area network, a key dependency for the system.

Despite having T1 lines connecting the headquarters to five facilities, the multi-service nature of the WAN plunged the EMR application into a constant battle for bandwidth, impacting its performance, and therefore its reliability. Not surprisingly, the bandwidth contention caused the EMR application to perform unpredictably, placing the quality of patient care in immediate jeopardy.

"Our EMR system is No.1 – It's the highest-priority application we have," Wyzik said. "It has both a radiation oncology module and a medical oncology module. We just use the medical oncology part for billing, charting, and scheduling. But we chose IMPAC's EMR system because it can drive radiation equipment, which will prove helpful in the future if we expand to offer those services.

"We host this application for a lot of remote sites using Citrix – in all, probably 30 to 40 connections back to our main office. We were having a problem with people getting their application dumped off line because of other users running Windows update in the main office, downloading files, sending large email attachments, or using RealPlayer. We just weren't doing a good enough job of stopping these things with our firewall."

Western Washington Oncology's issues with the EMR deployment were no different from those of many other healthcare organizations. Numerous oncology centers introduce critical Citrix-enabled applications to a wide-area network that features an array of traffic – from bandwidth-intensive radiology image transfers to email and Internet radio. At Western Washington Oncology, the WAN accommodates IMPAC's Multi-ACCESS EMR application, dictation system traffic, messaging, email, as well as TelNet sessions.



"Our firewall wasn't granular enough. There wasn't a way that I could say, 'I want this application to always take precedence over this application.'"

– Craig Wyzik  
IT manager

## **THE CHALLENGE: Ensure Key Applications Perform Efficiently and Reliably**

As a result, the EMR application was not the only one experiencing dropped connections. Other key applications were performing poorly as well. With performance issues putting its quality of care at stake, Western Washington Oncology focused on finding a solution that could ensure its critical applications performed efficiently and reliably.

As Wyzik soon found out, manipulating its firewall was not the answer.

“Our firewall wasn’t granular enough,” Wyzik said. “There wasn’t a way that I could say, ‘I want this application to always take precedence over this application. It was by a port-by-port basis, and it just wasn’t flexible.’”

Meanwhile, the significant time and money invested in implementing the EMR system was being frittered away with every dropped connection. Staff members and physicians emailed or called in to complain about the unpredictable performance. Their concerns were absolutely legitimate, Wyzik said. The oncology center needed its EMR application to perform effectively over the WAN as much as its patients needed to adhere to their treatment schedules. There was no margin for error – any deviation from patients’ treatment schedules could threaten the outlook of their medical conditions.

## **THE SOLUTION: Traffic Management Solution Provides Immediate Control**

IMPAC Medical Systems, a company that recognizes the importance of controlling applications over the WAN, recommended PacketShaper, a comprehensive traffic management solution from Packeteer®. IMPAC had already established PacketShaper as a proven, indispensable solution for managing bandwidth and ensuring effective performance of their application at other oncology centers.

In fact, PacketShaper’s monitoring and control features – which are based on Layer 7 classification, performance analysis, policy control, and reporting – enable oncology centers to manage more than just their EMR applications. PacketShaper monitors and controls the performance of all applications running over the wide-area network.

For instance, Western Washington Oncology can grant its EMR and dictation sessions improved access to bandwidth, while restricting the amount of bandwidth that email and Internet radio consume. Many healthcare organizations rely on PacketShaper to manage the delivery of large radiology images, which often consume inordinate amounts of bandwidth. By controlling the amount of bandwidth image transfers receive, Western Washington Oncology can avoid disruptions to its EMR traffic and other important applications.

## **Executive Overview**

### **INDUSTRY**

- Healthcare/Oncology

### **CHALLENGE**

- Ensure effective performance of Multi-ACCESS EMR application
- Gain visibility into network traffic
- Establish bandwidth priorities for important applications
- Control non-critical applications (e.g. email and recreational traffic)
- Maintain a high quality of care

### **SOLUTION**

- Deploy Packeteer’s Packet Shaper to monitor and control Multi-ACCESS and other applications based on their relative importance

### **BENEFITS**

- Ensures Multi-ACCESS performs efficiently and reliably
- Justifies investment in Multi-ACCESS
- Provides constant visibility into network traffic
- Supports quality patient-care objectives
- Extends existing bandwidth
- Avoids bandwidth upgrades

The PacketShaper deployment shed new light on managing WAN traffic. Gone were the days of manipulating firewalls and chasing port-hopping traffic in a reactive mode. PacketShaper introduced a refreshing, systematic approach to grabbing control of network traffic and extending existing WAN resources.

At first, Wyzik's team used PacketShaper to monitor its WAN traffic. The oncology center was able to discern different applications and could analyze their performance on the basis of various metrics, such as response times, delays, link utilization, and so on. Although Wyzik was confident he knew what types of traffic were running across the WAN, PacketShaper's Layer 7 visibility offered validation. In some cases, it revealed surprises.

"We found some traffic we didn't know we had," Wyzik said.

Once the oncology center had a firm grasp of what was running across the network, Wyzik's team employed PacketShaper's control functions to align application performance with important patient-care and business needs. This meant ensuring its EMR application performed efficiently and reliably, regardless of any bandwidth limitations or peak network usage.

"The Multi-ACCESS EMR system we purchased was a very high-dollar item, a very expensive investment," Wyzik said. "We knew that it would be foolish not to have PacketShaper. I can't imagine trying to run Multi-ACCESS and a lot of Citrix connections and not have it. I don't know if we can quantify the actual dollar amount in savings that PacketShaper gives us over time, but its ease of administration and making the end-user experience better is a no-brainer. Deploying PacketShaper was clearly the right thing to do.

"Our CFO said, 'it may seem expensive, but we have to have it. We can't 'not' have it.'"

### **THE RESULTS: Multi-ACCESS and the WAN Provide Unwavering Support for Patient Care**

Ask any physician or staff member at one of the facilities supporting multiple connections, and he or she would likely echo the CFO's thoughts. Wyzik acknowledged that without the traffic management device anchored to the WAN, the oncology center could easily incur greater expenses – in IT costs, lost productivity, and worse, lost faith from its patients.

Fortunately, Western Washington Oncology avoided that fate. PacketShaper ended the pattern of dropped Citrix connections throughout the oncology center's system. The complaint-laden phone calls ended as a result. If Wyzik wanted to, he could assess PacketShaper's impact solely on that basis. But he didn't need to. He referred to PacketShaper reports that reaffirmed the EMR application and other important applications were performing effectively.

Wyzik also gathered feedback from staff members, who further reinforced the fact that PacketShaper was aligning application performance and network resources with patient-care needs.

"Fewer dropped connections on wide-area network applications, and you'll get fewer complaining phone calls as a result of it," Wyzik said. "In talking to our staff, they said that Multi-ACCESS didn't seem

"We host this application for a lot of remote sites using Citrix – in all, probably 30 to 40 connections back to our main office. We were having a problem with people getting their application dumped off line because of other users running Windows update in the main office, downloading files, sending large email attachments, or using RealPlayer. We just weren't doing a good enough job of stopping these things with our firewall."

– Craig Wyzik



faster – it seemed more stable. The application is not going to get any faster. When working properly, it doesn't need to – it works quickly. With PacketShaper, the application will be more responsive and less likely to bump them offline, lock up, or drop packets."

But beyond the EMR application and other critical traffic, PacketShaper's ultimate value is clear-cut to Wyzik and Western Washington Oncology: The center will be able to administer a high quality of care to its patients while containing IT and operations costs.

"With PacketShaper, the application will be more responsive and less likely to bump them offline, lock up, or drop packets."

– Craig Wyzik

[www.packeteer.com](http://www.packeteer.com)

10201 N. De Anza Blvd  
Cupertino CA USA 95014  
T +1 408.873.4400 F +1 408.873.4410

