Organization

Carroll University
Waukesha, WI

Industry

Education

Challenge

Carroll University needed visibility into its network to control social media and improve performance of key applications in the university network.

Solution

The university deployed Blue Coat PacketShaper to provide visibility and to manage bandwidth.

Benefits

› Protect key faculty and educational applications

› Allow, but control, recreational traffic

› Provide quality tools for education while maintaining quality of life for students

› Comply with regulations

Carroll University Protects Key Applications and Controls Social Media with Blue Coat to Deliver High Quality Experience

Integrated visibility, control and compression capabilities allow this fast-growing university to keep pace with bandwidth demands.

Carroll University, Wisconsin's oldest institution of higher education, offers students a vibrant academic experience and state-of-the-art technology. The university sprawls across more than 50 wooded acres, and is just minutes from both the energy of Milwaukee and the serenity of local wilderness areas.

With a strong liberal arts tradition, high academic standards, and individualized attention, Carroll University has grown rapidly despite the difficult economic times. "In the last two years, a lot of schools have had to cut back. Our enrollment is at record levels. We're attracting fresh, young students from around the world," said John Arechavala, Director of IT Infrastructure Services at Carroll University.

"Our growth is driven by an amalgamation of superb faculty, the quality of life on and around the campus and state of the art technology. All combined people perceive and feel a very positive environment. Technology is the dark matter. You don't necessarily see it, but you know when it doesn't work."

Achieving a Delicate Balance

Keeping behind-the-scenes technology invisible is most challenging when the appetite for Internet bandwidth is nearly insatiable. Bandwidth demand has been ignited by students' pervasive use of technology, including VoIP, gaming and content-rich sites, such as Facebook, YouTube, Flickr, LinkedIn, and iTunes. Rich media also plays an essential role in academic instruction.

"We have to meet the requirements of the faculty and their academic endeavors as well as the administrative staff who run the university. We also have to maintain a level of access for residential students to ensure a good quality of life," said Arechavala.
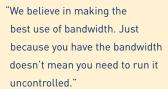
Carroll University found a way to protect key applications, such as Jenzabar CX academic and administrative software, Microsoft Exchange e-mail, TMA Systems maintenance software, and Altiris service management software, as well as control recreational traffic with visibility and quality of service. "We believe in making the best use of bandwidth," said Arechavala. "Just because you have the bandwidth doesn't mean you need to run it uncontrolled."

That philosophy has served Carroll University well. The institution is a pioneer in controlling bandwidth, having used Blue Coat's bandwidth management technology since 2002. Even in those days, the university wanted to optimize the use of its 45Mbps Internet connection. Blue Coat PacketShaper appliances allowed the university to control applications and hold the line on bandwidth upgrades. The Blue Coat Application Delivery Network infrastructure provides the comprehensive application and user control that Carroll University needs to contain network bandwidth costs and enhance its educational and residential life, while giving IT the flexibility to align the network with changing educational and recreational requirements.

"Our university is like a small city or town. Anything that can happen in a town, whether it is business, administrative, public safety, health services or recreational, happens here," said Arechavala. "PacketShaper has been flexible enough and responsive enough that it allows us to adapt to and meet our constituents' Internet needs."

Using Blue Coat's PacketShaper has helped Carroll University mitigate risks from non-compliance with regulatory and legal mandates. The Recording Industry Association of America (RIAA) has been pursuing individuals who illegally share copyrighted materials and threatening universities with litigation if they don't prevent illegal file sharing

> "We believe in making the best use of bandwidth. Just because you have the bandwidth doesn't mean you need to run it uncontrolled."
>
> **- John Arechavala,**
>   **Director of IT Infrastructure Services**

on their networks. "Our students were never threatened by RIAA largely because of PacketShaper and how we managed peer-to-peer traffic. We were able to respond satisfactorily to RIAA and the Health and Education Opportunities Act of 2008," said Arechavala.

Control Social Media and Accelerate Key Applications

Blue Coat technologies allow Carroll University to protect key applications to ensure a high quality of experience for faculty, students and other users, including the performance of streaming audio, video, and other rich-media applications. The use of PacketShaper ensures our sports events are available live for alumni and students' families by protecting the bandwidth needed for high quality "live" streaming of football, basketball and soccer games on the Internet.

Carroll's IT staff developed sophisticated application usage policies, and uses PacketShaper to control applications and apply bandwidth weighted for its application service levels. When classes are in session, academic and administrative applications have priority access to the network over gaming, YouTube, Skype and other recreational pursuits. But when classes end in the evening, the throttle is opened up and more bandwidth is available for students' recreational pursuits.

"The command scheduling feature of PacketShaper allows us to set up how bandwidth budgets are divided," said Arechavala. "We try to keep the bandwidth pretty fluid. We don't want calls from students asking why World of Warcraft doesn't work. At the same time, our professors may use Flickr for educational reference. YouTube can be a learning application. Controlling applications is a delicate balance."

The university faces a new challenge every fall when the new class of freshmen arrive, as they bring with them the very latest Internet trends. "We find out the new trends within minutes upon arrival of the freshmen's arrival. We use PacketShaper to control the applications. Do we need to kill it or manage it? Nine times out of ten we can manage it," said Arechavala.

Blue Coat's PacketShaper has provided Carroll University with greater visibility into applications on the network. With PacketShaper, IT can identify all the applications on the network and monitor the response times and utilization at the application level. "We use PacketShaper reporting to identify immediately if something is going on," said Arechavala. "We can identify where the leakage is occurring, and control it."

Blue Coat helps Carroll University's IT team provide LAN-like performance to staff who work at its physical plant and print shop, which is located off-campus. "Bandwidth to this location is limited, so we use PacketShaper to control users' activities on the Internet, such as limiting access to Facebook and YouTube, to ensure that large print jobs and work orders can get through," said Arechavala.

Carroll University has had a strong relationship with Blue Coat over the years. Interactions with Blue Coat support have been positive and training courses have been productive. "Calls to Blue Coat customer support have always been responsive, resolving issues promptly," said Arechavala. "Blue Coat training provided a cornerstone of what we needed to learn about PacketShaper and get the most out of the solution."

Managing More Bandwidth

In the fall of 2010, Carroll University will open a new graduate center, which will also be home to a new data center. To support the expansion, the university will light up additional dark fiber on the campus network and an upgrade from a 140Mbps Internet connection to 200Mbps. The data center at the new graduate center will become the hot site, with the current data center serving as the mirror site with PacketShaper playing a pivotal role managing the cloud. As Arechavala said, "if we pulled out Blue Coat, there would be chaos."