

## Case Study: Westminster College

### Controlling P2P Traffic While Ensuring Performance and Quality for All Key Administrative and Learning Applications

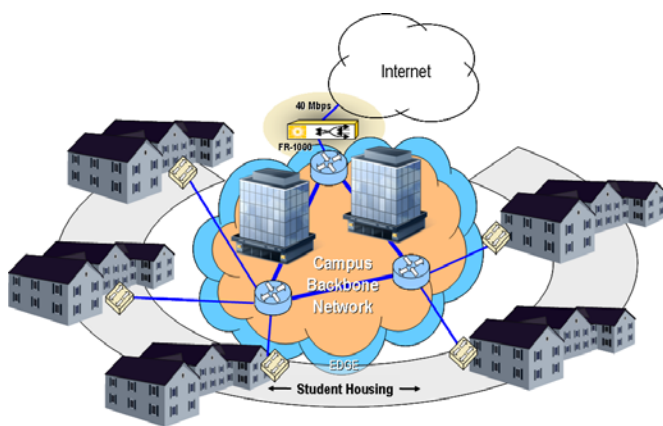
**Challenge:** Growing volumes of P2P traffic to and from student residence halls was impairing administrative and learning applications both on- and off-campus.

**Solution:** Anagran's FR-1000 high-capacity traffic manager instantly limits P2P traffic volume so all key administrative and learning applications can deliver required performance and quality.

Founded in 1852 and consistently ranked among the top liberal arts colleges in the U.S., Westminster College has almost 1,700 undergraduate and graduate students. The main campus is located in New Wilmington, PA., and like many colleges and universities, Westminster was facing a dilemma caused by the swelling volume of P2P file sharing traffic among students.

#### Westminster's Network:

Westminster's campus network consists of a Cisco 6500 series switched backbone with distributed power over Ethernet (PoE) switches, Cisco VoIP, a 40 Mbps link to the Internet, and gigabit Ethernet connections to each desktop. Each student has a network connection within their residence hall dorm room, from which they can access the Internet as well as administrative and learning applications served from the campus network.



#### The Issue: Rising P2P Traffic Volume

Over the past two years Westminster's IT department has seen a steady increase in network traffic between its student residence

halls and the Internet, as well as across the college's campus network. It didn't take long to find out the main culprit driving this increase in traffic. A number of students had discovered that P2P file sharing services allow for downloading of music, videos, and any other popular content among friends either across campus or across the country. Unfortunately, if left unmanaged, rampant P2P file sharing can quickly consume most of the available network capacity, often leaving little capacity for key administrative or learning applications that students, staff, and faculty depend on.

In an effort to effectively curb the rapid P2P growth and effectively manage its traffic, Westminster's IT staff deployed a popular "traffic shaping" appliance that uses deep packet inspection (DPI) based techniques. DPI-based appliances are designed to detect and "rate-shape" specific types of traffic. These devices were fairly effective for a while, but recently ran into two critical shortcomings:

1. Since most P2P traffic is now encrypted, large amounts of undetected P2P were "sneaking past" the appliances and quickly consuming the lion's share of network capacity
2. Westminster's installed DPI-based devices were struggling to cost-effectively scale beyond 500 mbps of processing capacity. For the GigE-based campus network, this cost-performance ceiling created an operational and budget crisis

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- Don Goodlin, Network Infrastructure and Telecom Division Manager, Westminster College

#### The Answer: High-Capacity Behavioral Traffic Management

Needing a solution that cannot be fooled by encryption or other creative means to "masquerade" P2P traffic, as well as a platform that can easily scale with network traffic growth, Westminster considered the Anagran FR-1000 high capacity traffic manager.

During a brief lab testing period, the FR-1000 detected all invasive P2P traffic, including all encrypted P2P. It also became clear that the slim, 1RU FR-1000 can easily meet any of Westminster's current or future network capacity and traffic volume requirements.

"From our testing of the FR-1000, it's ability to recognize any form of P2P and manage any mix and volume of traffic is superb," said Don Goodlin, senior engineer and manager of the Network Infrastructure and Telecommunications division at Westminster. "Anagran's product is now a key part of our ongoing network architecture and I expect continued exceptional results. I feel that the FR-1000 can find a place in any network. It is that good."

Going forward, Westminster plans to use the FR-1000 to provide the following key functions within their network:

- On-campus and Internet traffic management
- Application-specific traffic control (e.g. P2P)
- Sustained QoS for video and VoIP