Auburn University at Montgomery

FINDING BALANCE FOR NETWORK TRAFFIC

Auburn University at Montgomery (AUM) provides undergraduate and graduate programs to more than 5,000 students from its campus near Montgomery, Alabama. Like many universities, AUM has always had a technology presence, but when a new CIO was hired a few years ago, the university made creating an online environment for students a top priority.

Many courses are still offered in a traditional classroom setting, but the use of online courses is increasing rapidly. "Our campus has a limited amount of physical space," said Carl Simpson, institutional support specialist for IT Services. "In order for us to meet the needs of our student population, it made sense to add more online courses."

AUM has also seen a new type of faculty joining the school – one that is technology-focused and already familiar with the Blackboard Learn™ platform. "As some of the professors retire, many of the new faculty are embracing the online environment and becoming Blackboard power users," said Simpson. This has been good for the students who clearly want access to online courses, but was a challenge for the university's backend systems.

The university had one application server that ran the institution's entire Blackboard Learn instance, but as demand grew, AUM added three more servers to handle traffic. With four application servers each running different aspects of Blackboard, it became apparent

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that AUM needed a way to distribute connections across these servers and automatically transfer network traffic in the event a server went down. This would ensure that service would not be disrupted for students and faculty.

While two different solutions were initially considered, neither was a good fit for the university. "One solution fit our price range, but didn't have all the features we needed," said Simpson. "The other fit our needs, but was cost prohibitive."

It wasn't until AUM attended the annual Blackboard World conference that the perfect solution came to light. "I was introduced to Coyote Point during the conference and the price was great for all the features they provide," said Simpson. "It was also important that they were a partner of Blackboard because I knew the companies would work together to find a solution if we had a problem."

The university purchased one Coyote Point E450GX unit in the fall of 2010. The E450GX provides intelligent load balancing of network traffic and can handle up to 8,500 Secure Socket Layer (SSL) connections per second. The solution has enterprise-grade scalability and offers direct integration with VMWare for universities running virtual environments. This last point was especially important to AUM, as it had invested in a virtual infrastructure campus-wide at the same time it added the additional application servers.

The installation only took a few hours, but the university was having problems offloading Layer 7 SSL traffic in Blackboard. "Coyote Point worked with us to create a custom SSL offload solution to make it work to our needs," said Simpson. "Blackboard also listened and released Service Pack 8 for the Blackboard Learn platform which now supports Layer 7 SSL offloading."

The Coyote Point E450GX has already proven itself invaluable. "One morning I came into work and logged into the Coyote Point unit and was notified that one of the application servers was down," said Simpson. The E450GX had automatically transferred all traffic onto the three remaining servers. Once the downed server was rebooted, the E450GX re-balanced the load among all four servers again. "What could have been a major ordeal was a non-event with Coyote Point," said Simpson.

Webinars by both companies have also been helpful. "I have attended some great Coyote Point webinars where they are talking about things to implement in Blackboard and vice versa," said Simpson. "I have gotten some great ideas to implement advanced features like application automation and acceleration in our own environment that I didn't know existed."

Other groups within the university have also taken an interest in the Coyote Point solution. There are approximately 50 servers running a virtual environment campus-wide. The email solution takes up a large amount of the other servers on campus. "My counterpart that manages the email servers has been asking me about Coyote Point since he wants a load distribution and failover solution of his own."

In the future, Mr. Simpson would like to add another E450GX to the Blackboard servers. This will give AUM the ability to take one unit down for maintenance while the other keeps the network at peak performance. It would also add another layer of redundancy. "The partnership between Blackboard and Coyote Point has been a great experience for AUM since we get support from both ends," said Simpson.

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