UMS-WRIGHT PREPARATORY SCHOOL
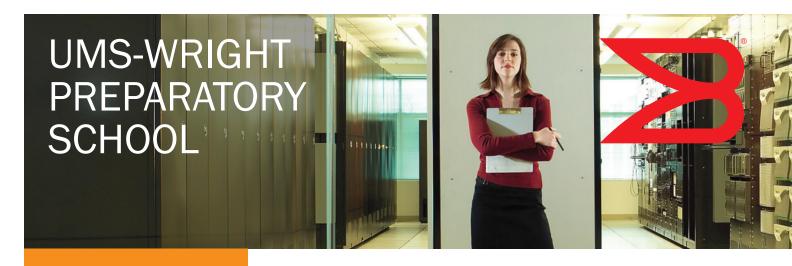
END-TO-END NETWORK

College Preparatory School Excels with Its High-Bandwidth Network

EXECUTIVE SUMMARY

Technology Challenge
Improved the delivery of high-bandwidth streaming video and data-intensive learning applications for the classroom over a high-performance, highly reliable network

Solution
- Brocade FastIron SX800 Switch
- Brocade FastIron GS Series switches
- Brocade IronView Network Manager
- Brocade 5100 SAN switches

Benefits
- Increased bandwidth to campus buildings and individual classrooms for applications such as streaming video
- Improved reliability through a virtualized network and redundant storage area network
- Enhanced ability to troubleshoot, manage, and monitor the entire network from a single management platform

UMS-Wright Preparatory School in Mobile, Ala. has very traditional roots. Founded in 1893 as the all-male University Military School, UMS-Wright has operated continuously for more than 100 years. In 1988, the school merged with its sister school and now functions as a co-ed college preparatory school that serves over 1200 students in grades K-12.

In other ways, UMS-Wright is anything but traditional. As the school has grown, it has embraced technology as a way to better engage students and prepare them for the college and university level. "There's no way a college prep school can send students to college and not have them comfortable with using technology," says Dr. Tony Havard, Headmaster of UMS-Wright.

To keep students on the forefront of technology, UMS-Wright underwent a total infrastructure overhaul. The school wanted to adopt streaming video and other applications that require a lot of network resources, and it also wanted to ensure its network could accommodate any future goals and plans.

MAKING THE GRADE WITH MULTIMEDIA APPLICATIONS

In the early 1990s, UMS-Wright had a basic network and computer setup. Over time, the school gradually upgraded its network and equipment—adding video, multimedia, and interactive whiteboard technology to classrooms. "We're able to give teachers a lot more tools for their classes and give them a broader range of options to enhance the educational experience," notes Ernest Kirkland, the school's technology coordinator.

To support these high-bandwidth applications and ensure that all campus buildings are connected with high-speed links, UMS-Wright needed to upgrade its infrastructure to be more resilient and powerful.

"Our network wasn't resilient. We had power problems, and our previous switching equipment couldn't handle these issues," explains William Hale, Systems Administrator at UMS-Wright.

BROCADE

BRINGING RESILIENCY AND REDUNDANCY TO THE NETWORK

To realize its goal of a modern networking infrastructure, UMS-Wright selected a wide range of Brocade products. The school uses the Brocade FastIron® SX800 as its core switch, and it has installed 21 Brocade FastIron GS Series edge switches. It uses two Brocade 5100 SAN switches (for redundancy) to support the school's Xiotech storage systems and HP virtualized server cluster.

The school also relies on Brocade IronView® Network Manager (INM) to oversee the entire network from a single console. In addition, UMS-Wright is using virtualization technology from VMware to cluster the school's gradebook application. "With such an important piece of software, we put that in our high-availability cluster. With everything being redundant, we now have no worries about downtime due to hardware outages or losing a server," says Hale.

IMPROVING NETWORK SERVICE QUALITY AND RELIABILITY

UMS-Wright's current network deployment gives the school a multitude of options and the flexibility to tailor the infrastructure for both present and future needs. "Teachers stream a lot of video and embed that video into their documents, so we saw a gigantic spike in network utilization," Hale says. "Two years ago, most of our network was running at 10 Mbps. Today the entire network is at gigabit speeds."

UMS-Wright has also gained the ability to monitor what is happening on the network. "Before this upgrade, half of our network included unmanaged switches, and we couldn't see what was going on in that part of the network," Hale states. "After the upgrade, I now have the ability to see network-wide what's happening, who is using the most bandwidth, and then troubleshoot from a single console." He credits Brocade INM and sFlow technology with giving him the tools to study trends in the network and have a better understanding of how much bandwidth is being utilized so he can make adjustments if needed.

With multimode fiber strung among campus buildings, Hale says troubleshooting has become much simpler. "We've streamlined the troubleshooting process from a day to half a day to just minutes," he says. "Using INM, I get an alert when we have a problem, so I'm able to be much more proactive."

PLANNING FOR THE FUTURE

One of the many advantages of UMS-Wright's new network infrastructure is the level of future-proofing it gives the school, says Hale. "We're looking at replacing our current phone system with VoIP. The Power over Ethernet [PoE] support on our Brocade switches allows us to put a phone literally anywhere on campus."

WHY BROCADE

- Advanced features and utilities from a leading networking provider
- Straightforward and uncomplicated setup and highly reliable equipment
- Strong sales and engineering support before, during, and after network installation

Hale also predicts that within the next five to 10 years, the school will need to upgrade its 1 Gigabit Ethernet (GbE) links among buildings to 10 GbE to accommodate high-definition video, large databases, and other advanced services and content that will consume bandwidth and other network resources.

Hale adds that throughout the network upgrade, one constant was Brocade and the level of professionalism, service, and products the company supplied. "I've worked with just about every product out there, and this was my first time working with Brocade," he says. "From now on I'll be a solid Brocade customer. They've offered solutions and service that are beyond excellent."

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