

Case Study: Affordable D-Link Switches Help Make Virtual Computing Lab a Reality for George Mason University



Named the #1 national university to watch by U.S. News & World Report, George Mason University is an innovative,

entrepreneurial institution with global distinction in a range of academic fields. Located in the heart of Northern Virginia's technology corridor near Washington, D.C., Mason prepares its students to succeed in the work force and meet the needs of the region and the world. With strong undergraduate and graduate degree programs in engineering and information technology, dance, organizational psychology and health care, Mason students are routinely recognized with national and international scholarships. Mason professors conduct groundbreaking research in areas such as cancer, climate change, information technology and the biosciences, and Mason's Center for the Arts brings world-renowned artists, musicians and actors to its stage.

The Challenge

George Mason University is implementing a high-performance academic computing infrastructure with which to better manage its computer labs and classrooms across four campuses. According to John Savage, director of advanced academic computing at Mason, "This new high-speed network allows us to completely automate the

distribution of computer software and introduce virtualization technologies within our academic facilities. All of this will provide improved access to computing resources for our faculty and students."

Another key benefit to these newly re-designed computer labs is the ability for students to access virtual systems, configured with their choice of software and operating system, on demand. The university will be able to meter software use and thus match tools and resources to need. Disaster recovery, in the event of failed workstations, can be accomplished in a matter of minutes as opposed to many hours or even days. It will also be possible for different software packages, as well as entire operating systems, to be made available within specific labs or classrooms automatically, according to a set schedule, maximizing the usefulness of vital but limited resources. According to Sharon Pitt, executive director of the division of Instructional Technology at Mason, "We want to be able to support learning needs in our classrooms and labs in a proactive, highly responsive way. IT should serve learning — not act as a barrier. These improvements within our computing facilities ensure that technology improves opportunities for learning."

To support these goals, a sound and secure, high-performance network infrastructure was critical. It



"When I was first starting the research, I wasn't hopeful that I was going to find a solution that would meet our needs and actually fit our tight budget. But The D-Link solution did and it provides the performance we were looking for."

— John Savage, director of advanced academic computing for George Mason University

was decided to establish gigabit Ethernet connectivity to each lab and classroom computer, joining them to a dedicated 10-gigabit backbone. In addition, an inexpensive stacking solution was to be used to provide network redundancy in a highly distributed fashion.

The Solution

A combination of D-Link 3400 and 3600 series network switches were ultimately selected for the Mason academic labs initiative. The solution not only provided the needed stacking and redundancy capabilities, but also offered

an economical 10-gigabit capacity. According to Savage, "The D-Link switches have no problem in moving large volumes of data from point to point, without any noticeable performance degradation. Without the ability to routinely move terabytes of data throughout the classrooms and labs, our ability to meet future goals for academic computing would have been seriously impaired. Now, however, many important initiatives are proceeding in record time. Our responsiveness to faculty and students in providing a variety of services has improved dramatically."

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