COMMUNITY COLLEGE OF BALTIMORE COUNTY TAKES LEARNING BEYOND THE CAMPUS WITH COMCAST BUSINESS SERVICES

SITUATION

- Multiple main campuses and satellite campuses in Baltimore County, Maryland
- More than 100 associate degree and certificate programs in a wide range of fields
- Annual enrollment is over 72,000 students
- Nationwide and international ties, with the student body representing 55 countries

CHALLENGE

- Support accelerating evolution of instructional media with scalable broadband Internet
- Support 24/7 demand with 24/7 network availability for a media-savvy student body

SOLUTION

- Comcast Business Ethernet Network Service
- Comcast Business Ethernet Dedicated Internet Service

RESULTS

- Connected campuses
- Availability and reliability
- New learning opportunities supported

Broadband Internet enables new educational collaborations for CCBC students

COMCAST BUSINESS SERVICES POSITION CCBC FOR 21ST CENTURY LEARNING

It has multiple campuses, tens of thousands of students, and a legacy of excellence to uphold – and Community College of Baltimore County (CCBC) is looking ahead, not back, as the expectations, experience and possibilities for college educations all change by the day. Institutional walls are vanishing as the geography of learning changes. Today's instructors use learning resources from an endless list of innovative sources. Today's students expect to work when they want, wherever they are, and to collaborate with friends worldwide. The challenges for schools like CCBC are controlling costs so the best educational value is delivered, while keeping up with the ever-more-rapid changes in media, technology and instruction that keep the school on the leading edge of learning.

Benjamin N. Thompson, manager of network engineering and information security at CCBC, achieves both with Comcast Business Ethernet Network Service and Comcast Business Ethernet Dedicated Internet Service.

COMCAST BUSINESS SUPPORTS INNOVATIVE EDUCATIONAL MODELS

"CCBC has worked with Comcast since 2002," Thompson says. "Comcast links the College's campuses with scalable bandwidth connections. We've seen a dramatic expansion in our bandwidth needs – in the past four years alone we've gone from 20 Mbps to 60 to 100 to dual 150 Mbps lines to support video streaming from the Internet." The College isn't unique in employing online video in the curriculum; schools everywhere from K-12 through college are making it an instructional staple. "And if you offer bandwidth, it gets used quickly," Thompson agrees. "The increase we've seen in multimedia content would swamp us if we weren't upgrading to meet the need. Fortunately the process with Comcast has always been smooth." Thompson trusts Comcast enough to use it for his redundant paths. "Usually you get redundant paths with two vendors," he says, "but we just sent a second path through Comcast. We choose redundancy through Comcast because we're confident in the reliability."

COMCAST
BUSINESS

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>
> *Benjamin N. Thompson*
> *Manager of Network Engineering and Information Security Community College of Baltimore County*

New frontiers in learning do even more to break down classroom walls: new Cloud-based applications require massive information sharing among many participants. The Community College of Baltimore County is collaborating with the Massachusetts Institute of Technology's Center for Bits and Atoms (CBA) Fab Labs – "Fabrication Laboratories," more formally – that presently link over 100 institutions in digital fabrication projects including innovative energy technologies, computer hardware, shelters and even prosthetics. The information being exchanged is massive. The network is global, with 40 labs to date in the United States, and others worldwide. Presently, the only one in Maryland is the one at CCBC, which opens unprecedented opportunities for CCBC students to hone their skills and share their talents with the Fab Lab network of professors, patent attorneys, artists, marketing experts, engineers, and business owners. "The CCBC Fab Lab is open to students, faculty and the general public, so we need a reliable, high-speed Internet connection that can handle our growing bandwidth demands while also minimizing lag time," says Ben Thompson. "It doesn't matter if it's a simple .pdf or a huge design file – students want it to open like it's on-campus, not like it's somewhere distant. Many of these new applications are moving to the cloud, and we're relying on Comcast to give us that low-latency connectivity."

BUILDING THE 21ST CENTURY EDUCATIONAL EXPERIENCE WITH COMCAST BUSINESS

Connected campuses
Comcast Business permits any CCBC site can send traffic to any other site within the network through a single Ethernet interface. The flexibility permits Ben Thompson to manage and change VLANs (virtual local area networks) 'on the fly' to control routing. As Thompson explains, "That means we have QoS (quality of service) on the fly. Setting up a new site used to take days with T1s and TLS, but now the process is quick and easy with Comcast."

Availability and reliability
Education is 24/7, beyond clocks and walls, and its needs change rapidly. Comcast gives Community College of Baltimore County the secure, reliable, high availability network it needs to deliver its administration and records as well as its instructional materials, where and when they're needed. "My local Comcast support team is just a phone call away," Thompson says. "If there's an issue, they are on it immediately."

New learning opportunities supported
Comcast Business provides the scalable bandwidth CCBC needs for distance learning now and for Cloud computing in the future. Online video, international collaborations, and Fab Lab networked teams are opportunities that will require almost limitless bandwidth. Ben Thompson feels CCBC is ready: "Online distance learning is growing more rapidly than anyone anticipated," he says. "Scalability is extremely important to us, especially as we move into more Cloud-based applications. All I have to do is bump up the bandwidth, and we're good to go."