

## Roanoke College

### Network problem

- More devices connected to network
- Increased use of cloudbased learning management system
- More staff connecting remotely
- Need for robust, always-on network

### Lumos Solution:

#### MetroEthernet + SIP

- 7Gbps MetroEthernet
- 2 onsite fiber feeds
- 1 offsite fiber feed
- SIP trunking

### Results:

- Bandwidth constraints removed
- Network redundancy on a budget
- Increased call capacity
- Online learning facilitated

# Roanoke College Case Study

## Beating the Bandwidth Boom at Roanoke College

"When we started to have growing pains with our internet service, everyone on campus realized how much we needed it. It had become just like electricity - people immediately noticed if it wasn't there," says Rebecca Sandlin, Chief Information Officer at Roanoke College.

The second oldest Lutheran-related college in America, Roanoke is located near the center of Salem, Virginia, just ten miles from the Appalachian Trail. It has a diverse student body comprising 2000 people from 40 states and 25 countries. Around 80% of the students live on campus.

## A Custom Fiber Network for Roanoke

Roanoke has been a Lumos customer since 2008. The college's custom network includes two fiber feeds on campus for redundancy and SIP trunking for voice services. SIP is a more cost-effective way to deliver voice services and includes unlimited dialing, a major benefit for educational institutions that have to handle a lot of calls. While voice services are vital, they are less important than the ability to carry the right amount of data, as Lumos Sales Manager Dan Overstreet points out: "Internet has become more important than the spoken word."

That's why in the last two years alone the bandwidth Lumos delivers to Roanoke has more than tripled from 200 Mbps to 700Mbps. The college is used to bandwidth spikes during the data heavy registration and orientation period, but one of the factors that's driving the overall increase in demand is the rise in the number of devices that have to connect to the network. "Students used to come to Roanoke with one device, but the average is now three," comments Rebecca.

*The internet had become just like electricity - people immediately noticed if it wasn't there.*

## Educational Technology and the Netflix Effect

Students also need increased access because of technological changes in educational delivery. Roanoke has a cloud based learning management system where flipping the classroom so students can view lectures online has become more common. "They can watch some of the more complicated lectures ahead of time and get more deeply into the subject matter in class," says Rebecca. She says student demand for the internet is heaviest between 10pm and 2am. "Students are using the internet at all hours. All the cool streaming video websites like Netflix aren't just for recreation; they are also used for class assignments."



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And it's not just the students who are eating up the bandwidth: "We also have email in the cloud, Office 365 and other collaborative tools that we'll probably be using more over the next few years. Faculty and staff also rely on the fact they can connect remotely to access academic software and use office software to do their jobs at all times."

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## Balancing the Books on Bandwidth Increases

Bandwidth may be rising, but budgets certainly aren't, so Roanoke needed a cost effective custom network solution. Lumos delivered. Major Account Manager Michelle Dearing explains: "We negotiated another fiber feed with a local municipality to balance the data needs." This resulted in a significant cost saving for Roanoke, something Lumos was happy to provide. Dan adds: "We want to know what keeps customers awake at night and provide a solution that solves those problems economically and flexibly."

Another part of the custom network solution for Roanoke was building in redundancy to create a robust, always-on network. "No downtime is acceptable. We have to have access all the time. Students can't get their homework done if they can't get onto the internet. You need to find an ISP that can guarantee redundancy throughout the whole pathway - that's what we have with Lumos," says Rebecca.

## A Partnership You Can Take for Granted

She especially appreciates the fact that Lumos "will listen to what our needs are and not try to force a solution that worked for some other company." That's true customization. Michelle agrees: "We look at the applications they are using and the products we have and think about how we can make a good marriage between the two."

This approach works for Roanoke, says Rebecca: "Over the whole six years, Lumos has been a company we can take for granted, which is a bigger deal than it sounds. Any time I call them, they are always available and they are really good to talk to. I feel like together we work as true partners to come up with the best solution for Roanoke."

She concludes: "Partnering with a company with Lumos is really important. These kinds of partnerships help institutions like ours move into the future and enhance research, learning and scholarship."