Maryland College Lifts Local Employment by Quickly Setting Up Connectivity for Job Training with a Juniper Network

Summary

Company:
Prince George's Community College

Industry:
Higher Education

Business Challenge:
Deliver high-performance, reliable voice, video, and wireless services to community college classrooms that must be up and running on short notice with minimal cost

Technology Solution:
- SRX240 and SRX100 Services Gateways
- EX2200, EX4200, and EX9200 Ethernet Switches
- MX10 3D Universal Edge Router

Business Results:
- Cut time to open new workforce development classes from 180 days to 21 days or less
- Saved $46,000 per site for delivering network services to each new classroom location
- Readied students with the skills, training, certificates, and licenses they need to be hired for 4,000 new jobs

When MGM Resorts announced that it was opening a casino at National Harbor in Md., Prince George's Community College began designing skills-based classes to produce a qualified, trained workforce to fill thousands of new jobs. Prince George's Community College has offered high-quality, affordable education and cutting-edge workforce and development training to residents in central Maryland since 1958. The community college serves a population of 44,000+ students per year, while offering more than 200 academic and workforce development and continuing education programs.

Business Challenge

The State of Maryland has been chipping away at its unemployment rate by improving workforce development through local community colleges, technical schools, and training centers. These institutions fuel job growth by preparing the local population with new skills, and Prince George's Community College has been a ready partner in this endeavor. In addition to the school's ongoing academic schedules, Prince George's Community College is occasionally tasked with setting up remote teaching centers on short notice.

"We needed a cost-effective option to bring our educational programs onsite," says Bill Anderson, chief technology officer at Prince George's Community College. "For the new MGM Grand Casino partnership coming to National Harbor MD, we will be offering training in hospitality, culinary, and security classes. We are anticipating class location changes that may occur on short notice to get the facility wired and ready. A service provider's provisioning cycle can be between 90 to 180 days and that doesn't work for us."

On top of the long wait, the network setup costs for a class site were expensive, approaching $46,000 each. "Juniper gave us a different approach that lets us stretch our network anywhere we want and stand up a site in 30 days," says Anderson. "Being able to bring our network to any location on short notice is phenomenal."

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Manuel Arrington, Director of Network Services and Telecommunications, Prince George's Community College

Technology Solution

Prince George's Community College has more than 30 halls, centers, athletic fields, and temporary buildings that crisscross 150 acres eight miles east of Washington, D.C. In the network that serves the main campus and five remote extension center sites in Prince George's County, Juniper Networks solutions provide the primary horsepower for students' video, mobile, voice, and Web 2.0 traffic needs.

Before moving to Juniper Networks, the college's network was breaking under the strain of video demands from videoconferencing, and other high network demand applications, combined with an increase in wireless LAN traffic coming from nearly 400 access points positioned throughout the campus. The college replaced its aging network with a new network from Juniper to handle the bandwidth demands, ease management, and improve reliability.

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Redundant Juniper Networks® MX10 3D Universal Edge Routers deliver high-performance routing to support the school's many educational and administrative applications. The MX10 is a compact, powerful routing platform that provides investment protecting scale through 80 Gbps via license upgrades, meeting the college's capacity needs for both today and tomorrow.

Juniper Networks EX4200 and EX2200 Ethernet Switches are used for aggregation and access. The EX4200 switches are deployed in a Virtual Chassis configuration, which enables up to 10 interconnected platforms to be operated and managed as a single, logical device, providing a high-performance solution that combines the availability and reliability of modular solutions with the flexibility of stackable switches. The compact EX2200 line of Ethernet switches, meanwhile, provides an economical, low-density switching solution.

The remote sites rely on Juniper Networks SRX Series Services Gateways for high-performance security, routing, switching, and WAN connectivity. The college uses SRX240 gateways in its larger sites and SRX110 gateways in smaller locations. The college assures WAN connectivity to its extension centers by configuring the SRX Series gateways with diverse connectivity options that automatically move between the school's metro Ethernet provider and the site-to-site Internet VPN. If one service provider suffers an outage, the backup link automatically carries the traffic and users don't see any downtime.

Business Results

Students are enjoying faster, more reliable connections on campus and at the extension centers. Connecting to the Internet by laptop or mobile phone, accessing online resources for class assignments or grades, and videoconferencing are all aspects of life that college students expect. "The network should be like turning the lights on—it's a utility that needs to work all the time," says Anderson. "Juniper gives us the stability of a utility, and the network is consistently reliable."

Reliability is a factor for students on campus as well as at the extension centers, which serve degree seeking students and those seeking accreditation in trade and technical services based on local business needs. With a Juniper network, the school's IT team can easily add a site to the VPN via cable, fiber, or broadband Internet.

Skyline Technology Solutions, the college's solution partner, has a long history of supporting the IT needs of Maryland's government and academic community. Skyline designed and deployed the network for Prince George's Community College. "Skyline presented us with flexible options for reliable connectivity," says Anderson. "With our partnership with Skyline and Juniper, we are able to quickly establish new network connections to new sites which helps us provide improved service to the students we serve."

The cost to network new sites declined significantly because of the flexibility of the new Juniper network. Provisioning times can be as fast as 21 days. "We can throw up a site-to-site connection in almost a tenth of the time at a much lower cost," says Arrington. "The partnership with Juniper Networks and Skyline affords us the opportunity to be better prepared to respond to the needs of the senior leadership and college community when the college enters into agreements that require fast turnaround."

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Next Steps

Prince George's Community College has big plans for the network that will cut costs and provide more learning opportunities for students. "We pay a tremendous amount of money for commercial metro Ethernet," says Arrington. "We want to leverage the MPLS capabilities we get with Juniper technology to switch from metro Ethernet. MPLS aligns us with the county network. It also will allow the College to phase out some of its commercial WAN contracts."

The new network properly positions Prince George's Community College to move on an upcoming project to deploy Virtual Desktop Infrastructure (VDI) across all of the college's labs. "We have a couple dozen labs and more than 3,000 computers in the labs," says Anderson. "Juniper's solid performance and stability are critical in converting to VDI."

Anderson knows other projects will come up that will put demands on the network, but he's confident that his technology partners will deliver. "Skyline and Juniper have always met, if not exceeded, every objective."

For More Information

To find out more about Juniper's products and solutions, please visit www.juniper.net.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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