

## Extreme Networks and Palo Alto Networks Integration Provides Faster Troubleshooting, Enhanced Security and a Better Student Experience

### CASE STUDY

#### MOUNT UNION STATS

- Networking IT Staff: 4
- Users: 3,000 (Staff & Guests)
- Devices: 13,000
- Locations: One campus & the remote Huston-Brumbaugh Nature Center

#### INDUSTRY

- Higher Education

#### CHALLENGES

- Network, user, device, and app visibility
- High-performance network to support wireless and BYOD
- Adequate time to troubleshoot and respond to issues
- Secure access to students, faculty, staff, and guests

#### PRODUCTS UTILIZED

- S-Series Modular core switches
- C-, B-, and K-Series edge switches
- NetSight Advanced
- IdentityFi Wireless
- Purview Application Analytics
- Network Access Control (NAC)
- Palo Alto Networks 4000-Series Firewall Platform

#### RESULTS

- Secure, reliable high-performance network
- Central management, visibility and control of the entire network
- Better user experience
- Improved decision making
- Cost savings

Founded in 1846, the University of Mount Union is a four-year private institution grounded in the liberal arts tradition. Receiving consistent top rankings from U.S. News & World Report, the University of Mount Union's mission is to prepare students for fulfilling lives, meaningful work and responsible citizenship. Mount Union's picturesque 123-acre campus is located in Northeast, Ohio, with an additional 162-acre nature center located six miles away.

Although Mount Union is a relatively small campus that serves approximately 3,000 users, an average of 13,000 devices simultaneously demand fast access to the network and its many applications. To meet the growing mobile demands of their students, faculty and staff, Mount Union partnered with Extreme Networks to upgrade their infrastructure, and Palo Alto Networks, to provide the firewall to secure it. The integrated solution has allowed Mount Union to double the size of their network, increase technology in the classroom, and enhance network security despite the challenges of tightening budgets and staff reductions.

University students and staff demand fast access to the Internet for a variety of applications such as streaming video, social media, YouTube, cloud-based email and a wide-variety of educational and administrative systems. With 3,000 users and 13,000 devices, the Mount Union IT staff was challenged with "allowing everyone to do everything all the time," while keeping the network secure. "Our goal in IT is customer service and it's all about the student experience," says Assistant Director of IT for Technical Services Dave Smith, "if students can't access the resources they need or want, it's a bad experience with technology which correlates to their opinion of the University as a whole."

### Challenged to Do More With Less

The Mount Union Office of Information Technology was challenged to keep up with the mobile demands of students and increase educational opportunities, while finding ways to be more efficient and keep costs down. "Five years ago we did not have as much technology within the curriculum as we do now, and we are continuing to grow in a lot of areas, but staffing in IT is not one of them," says Tina Stuchell, executive director of information technology, "which is why getting the right tools in place to help us more efficiently manage and secure the network is critical to our current and future success."

In order to improve the network experience of its students, Mount Union required an integrated solution that would allow them to increase network bandwidth to handle the growing number of users and devices on the network requiring fast internet access. This new solution would reduce latency in apps, reduce troubleshooting time, and improve security by giving them visibility, insight, and control over all of the individual devices, users, and applications on the network.

## Extreme Networks and Palo Alto Networks – A Winning Combination

Having been an Extreme Networks customer since implementing their first network in the early '90s, Stuchell says that of all the vendors she has dealt with, Extreme Networks' support is one of the best. When it came time to upgrade their network, they once again chose to partner with Extreme Networks. Knowing that Palo Alto Networks was a partner of Extreme Networks gave Mount Union greater confidence that the two solutions would be able to come together to help them to effectively manage, monitor and secure the network.

The Extreme Networks and Palo Alto Networks integrated solution, chosen by Mount Union, is designed to handle the high-demand, high-availability and security requirements of a University environment. The implementation includes Extreme Networks S-Series switches at the core, C-, B- and K-Series switches at the edge, IdentiFi Wireless, NetSight, Network Access Control (NAC) and Purview, as well as Palo Alto Networks 4000-Series firewall platform.

Mount Union's infrastructure is easily managed by the Extreme Networks network management solution, NetSight, which provides a unified console allowing the entire network, and all its components, to be viewed at a granular level. The Palo Alto Networks firewall works in conjunction with Extreme Networks NAC and Purview application analytics, to identify network traffic and the users it belongs to, and provide visibility into which applications the users are running.

"There are thousands of devices on the network and without something to help us get more granular, it's hard to pinpoint issues," explains Stuchell. "The combination of NetSight, Palo Alto and Purview working together brings the information down to the client level instead of the subnet level, allowing us to troubleshoot much faster and deliver a more secure network."

### Providing a Seamless and Secure Customer Experience

Mount Union's infrastructure upgrade enabled them to double the size of their network allowing them to provide a better experience for their 3,000 users. Thanks to the Extreme Networks and Palo Alto Networks integrated solution, the University is able to increase technology in the classroom, despite tight budgets and staff reductions, and enjoy the benefits of:

**Faster Troubleshooting** – "One of the biggest benefits is how much faster troubleshooting is now compared to before the integration of the products," remarks Stuchell, who says that, "the troubleshooting time for IT staff has gone down significantly since the implementation of Purview which helps keep the costs of staffing resources down, which in turn keeps the cost of education down." Extreme Networks Purview provides visibility into applications and insight into latency issues both within and beyond their infrastructure, allowing the Mount Union IT team to easily locate problems for fast resolution, ensuring the best user experience.

**Improved Decision Making** – Palo Alto Networks firewall and Extreme Networks' NAC and Purview work together to provide visibility into the network connection, the user, and the application. "Prior to Purview, Palo Alto Networks gave us visibility into the Internet connection; Purview is able to individualize the traffic to a per user, per app basis allowing us to easily create intuitive reports at the click of a button for the things we look for on a daily basis," says Stuchell. By combining the information they derive from the Extreme Networks and Palo Alto Networks

integration, Mount Union is able to access reports about their traffic, users and applications, which provide them the knowledge they need to secure and optimize their network. They have insight into the applications being used, as well as how much data is involved at one time. Armed with this information, they can provide statistics for their President's Council about top applications and make smart decisions about redirecting bandwidth or build a case for increasing bandwidth.

**Increased Security** – The combination of Extreme Networks' Purview, NetSight, and Palo Alto Networks' firewall help reduce the response time for security issues. "You can't have a network without a firewall," says Smith, "and we have two – one at our main campus and one at the remote Nature Center." With their IdentifiFi Wireless network in place, users now have the freedom to roam the campus and connect to the network, not only through different methods, but also from different devices. This poses critical challenges to securely manage the network and thanks to Extreme Networks and Palo Alto Networks' products, Mount Union is able to identify users at the port level. Using Palo Alto Networks firewall and Extreme Networks' NAC, Mount Union's IT team is able to implement policies and checks and balances to control access to the system for students, faculty, and guests. Palo Alto Networks' firewall finds the IP address on the outside and works with Extreme Networks' NAC to match it up on the inside. If a security threat should arise, having this information helps to increase response time.

"Last year a student's laptop was stolen and we were able to locate it as soon as it came back on the network and apprehend the perpetrator. We would not have been able to know the device was back on the network if we didn't have the right tools in the right place on the network side," says Smith.

## Better Together

Extreme Networks and Palo Alto Networks integrated solution increases the speed of the network and provides granular visibility into the network allowing the University of Mount Union to meet the needs of the growing number of users and devices, and enable the IT team to troubleshoot and react quicker. The result is a more secure network and an improved experience for students, faculty, and guests which translates to a more positive University experience overall.

Mount Union plans to leverage the integration to look at latency in apps in greater depth, especially in streaming media, which Smith says is in large demand with their student population, "if it has to buffer, that's a problem, so we plan to use Purview to look at bandwidth per hour so we can proactively make the case to add more bandwidth as we get close to our capacity."



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