

University Gains Visibility Into Newly Upgraded Network

Performance and security for faculty and students makes monitoring infrastructure necessary

Summary

Customer: Large Public University

Industry: Education

Location: USA

Challenge:

- Increase network visibility
- Remote troubleshooting
- Right traffic to right tools
- Improve security monitoring

Solution:

- IntellaFlex Monitoring Solution
- IntellaStore II Appliance
- TitanXR Management System

Benefits:

- Complete network visibility
- Filtering and aggregation of data
- Proactive vs reactive monitoring
- All-in-one solution lowers costs
- Centralized management

Advanced network capabilities along with network performance improvements have led to an increase in user expectations. That is certainly the case at many colleges and universities. Both students and faculty members are now expecting better performance from campus networks – requiring higher and higher speeds, both for personal and professional computing.

Shifting expectations, increasing complexity and security requirements are a few of the reasons that many universities are upgrading their networks, and it's why a school in the southeastern U.S. engaged APCON.

Upgraded Network Needed Monitoring Plan

Over the past couple of years this university has gone through a major technology update across its campus, installing an entirely new network infrastructure.

At the core of the network, the school has installed 10 Gbps equipment, which they will be updating later in the year. It's running 10 Gbps hardware to over 200 buildings on campus, and then one Gbps to the desktops. There's also a huge wireless network with more than 2,200 access points across the campus. All of this is supported by two data centers.



As the new network was coming online, university officials realized there was an issue with their plans. They had great network functionalities but needed centralized monitoring capabilities. Previously, they were troubleshooting network issues with monitoring tools, a laptop and a crash cart. It would be ideal if they could capture packets of data and perform analysis without having to run around to different spots on the campus.

Another concern was keeping this new network secure. Obviously, security is a concern with any network. But the somewhat transient population and high volume of users can make security for a university extra challenging. Visibility into all of the traffic on the network in a timely manner is critical.

This university needed new monitoring functionality.

IntellaStore II Appliance

Relying on a crash cart for network monitoring wasn't effective for the university's future growth. The university decided it needed a robust monitoring architecture that was cost effective.

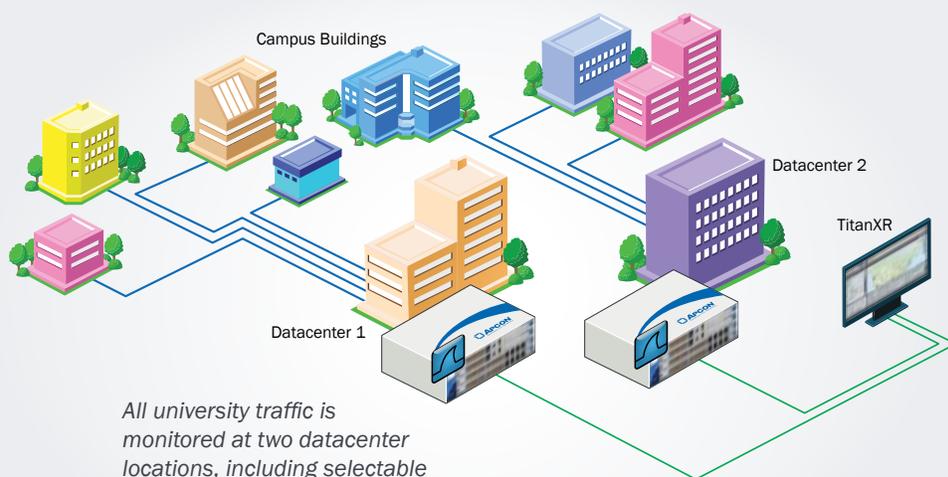
APCON's IntellaStore II monitoring appliance addressed both of those challenges. It's ability to capture, store and analyze data all on the same device means that the university was able to take a first step into monitoring while keeping its investment reasonable. And with Wireshark native to the IntellaStore II, and support for 15+ certified security and performance monitoring applications, the university was getting recognized tools from the outset.

IntellaFlex Monitoring Solution

A network the size of this university's creates a lot of traffic. In order to accomplish complete visibility, the school installed APCON's IntellaFlex monitoring solution with input from SPANs and Taps at key locations across the network.

With a combination of 1, 10 and 40 Gbps ports, the university's network extends from the desktop to all buildings to the core. The IntellaFlex solution allows traffic from multiple points in the network to be aggregated and filtered so that only the packets of interest are forwarded to the appropriate tools. Filtering options include traffic from a specific IP address, protocol or VLAN.

The monitoring systems were designed to scale, with extra capacity for future growth and plenty of expansion to add external monitoring tools as needed. Their monitoring efforts will expand, and with the scalability of the system, the school is ready.



All university traffic is monitored at two datacenter locations, including selectable packet capture and analysis.

Proactive Monitoring Made Possible

For the university, working with APCON was about gaining visibility into the network that it had spent time and money upgrading. The university also bought TitanXR, APCON's management system that centralizes the monitoring into a single pane of glass with convenient graphical dashboards. This gives the school's engineers the ability to do trend forecasts, allowing them to get ahead of any potential issues, something they couldn't do before.

This is a first step. University officials know that they have other monitoring needs. For instance, there are other remote sites across the state. The school is also the leading state entity for a statewide optical network initiative that connects all the leading universities and the state's super computers. Various government entities, like the Departments of Transportation and Education are beginning to be brought into that network. The university knows it needs visibility at those remote sites and across the optical network as well. In partnership with APCON the university is getting ready for the future.