Clarke University

Clarke University builds a flexible, adaptable Power-over-Ethernet network with Microsemi's midspans

With students driving the mobile computing revolution, Clarke University's IT team is challenged to support them with a state-of-the-art 802.11n wireless network. While Microsemi's Power-over-Ethernet (PoE) midspans were originally installed to support a new VoIP system, they also allowed Clarke University to upgrade every AP on campus for 802.3at power and its resulting increase in wireless performance.

Fast Facts

- Adheres to current and emerging PoE standards, allowing for longevity and preventing the need for regular technology upgrades

- Microsemi midspans offer a full range of power solutions with plug-and-play installation, providing headache-free installation

- Midspans offer flexibility to expand PoE capacity without interfering with the data switch side of the infrastructure

- Adaptability inherent in the technology eliminates the learning curve—a new midspan can be easily installed and understood, supporting current and future needs

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About the Deployment

The Challenge

With a growing and evolving campus infrastructure, Clarke University required PoE to maintain and support the demanding power requirements of 802.11n wireless technology. The university needed a solution that would adequately power its VoIP infrastructure while also ensuring the future use of other PoE applications and devices. Two options existed for adding PoE: either upgrading the switch infrastructure with PoE modules or adding PoE midspans. The modules were more affordable than adding midspans, but Microsemi's midspans were more easily installed and offered IEEE 802.3at certified power offering 30 watts per port, which was unavailable in the switch modules.

The Solution

Although the switch modules provided the more immediately affordable option, Clarke University found the soft cost savings of deploying higher power Microsemi PoE midspans were significant enough to reduce the total cost for the midspan solution below that of the switch option. According to Clarke University Network Administer, Andy Bellings, "Microsemi's midspan units cost more than purchasing the internal PoE modules for our existing switches, but the Microsemi units support IEEE 802.3at and the internal modules only support 802.3af. Also the Microsemi midspans could just be added to the wiring closets without have to de-rack and open all of their switches. It was a huge saving in time and effort."

Additionally, the midspan solution made it possible for Clarke University to upgrade its network to an 802.11n wireless network without having to reinvest in power or switching hardware, as well as set the university up for future upgrades to its IP security network. Regarding the ability to upgrade, Bellings stated: "With the 802.3at technology we are ready for expanding security cameras across campus when the need arises." Without the flexibility in port count and power output of Microsemi's 802.3at midspans the upgrade to new PoE networks would not have been possible leveraging the existing infrastructure.

In addition to the value of high power 802.3at standard PoE, Clarke University's IT team found value in investing in its power infrastructure once, rather than repurchasing power with each future switch

upgrade. According to Bellings, "Our switches are 5 years old, and we may replace them in the next 2 to 3 years. If we do replace them and we used the internal PoE modules, we would end up having to purchase them again in fairly short order."

Implementation

A midspan is a layer one device that sits between a network switch and end devices. Microsemi midspans can be either rack-mounted or standalone devices that come in 1, 4, 6, 12 or 24 port configurations and offer up to 60 watts of PoE per port.
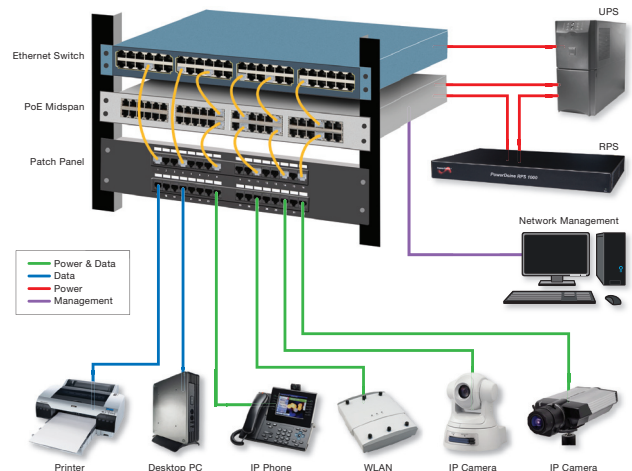
Business Value

Microsemi's PoE midspans offer greater flexibility and upgradability than PoE enabled switches. The PoE installation was originally intended for IP phones, but since it could power up to 30 watts per port, Clarke University was able to also support the upgrades to PoE 802.11n wireless network and also build for future IP security upgrades. Though the switches offered cheaper short term investment, Microsemi's PoE midspans were more easily installed and offered additional cost savings through greater flexibility and network longevity. According to Bellings, "Everything is moving to 802.3at, and who knows what type of tech is coming down the line that needs more power."

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