Students are saved by the bell with Eaton UPS

Location:
Des Moines, Iowa

Segment:
Education

Challenge:
The routine battery failure of APC UPSs was creating a lack of reliability for the district's critical equipment.

Solution:
Eaton® 9130

Results:
The 9130 not only meets the district's uptime requirements, but affords a variety of additional benefits, as well.

I've standardized on Eaton. I'll be staying with them.

Scott Crothers, network engineer

Background

For more than 100 years, West Des Moines Community Schools (WDMCS) has been preparing learners for life. As Iowa's ninth largest school district, WDMCS serves more than 9,000 K-12 students at 13 different schools, while employing approximately 1,200 people.

Located in central Iowa, WDMCS is part of a vibrant suburban area directly bordering the state capital of Des Moines. Business Week recently named the community one of the best places to raise children and Money Magazine named it as one of the top 100 best places to live.

Challenge

Undeniably, it's one of the highlights of the day for the majority of students: the sounding of the bell indicating that class is over. The 9,000 pupils within WDMCS are no different — relying on the district's clock and bell systems to accurately count them down to the end of the day, not to mention recess, lunch and daily course changes.

But a few years back, the dependability of this routine was threatened by reliability issues stemming from the district's APC uninterruptible power systems (UPSs). Installed within data closets at individual school campuses, the UPSs were tasked with protecting the equipment responsible for the clock and bell systems, as well as a variety of switches.

"Each school has anywhere from five to 72 switches," explains Scott Crothers, the district's network engineer. "We absolutely need this equipment to be protected at all times."

Yet the routine failure of the APC batteries was causing headaches for the district. Even worse, "too many times, I would replace the battery but the UPS electronics would still be bad," Crothers reveals.

As a result, as the units began dying off one by one, the network engineer sought to replace each with a more dependable solution. In addition to reliability, "I was looking for a unit that was easy to service for the batteries," Crothers adds. "I also wanted something that would give me some control and wasn't just flashing lights."

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Eaton 9130 UPS

The Eaton 9130 UPS comes in both tower and rackmount form factors.

Solution

Having already installed an Eaton 9390 UPS within its data center — as well as an Eaton 9170+ to safeguard the LAN and phone system in the administration building and a 9155 attached to its EMC backup solution — the district knew exactly where to turn to achieve ultimate protection for its data closets. In Eaton, WDMCS had already found a trusted source for high availability and uptime, so the Eaton 9130 UPS was a natural choice to deploy at the school sites.

Indeed, ever since it began rolling out the units in 2010, the district has encountered zero issues or failures whatsoever.

"Every time an APC unit would fail, instead of buying new batteries, I would just replace the entire unit with an Eaton 9130 UPS," Crothers explains, adding that there are currently approximately 40 9130s in operation. "I'm almost done replacing the old APC units now. The 9130s last longer and I have yet to have anything happen with one."

In addition to the level of protection afforded by its online design, the 9130 offers premium power performance with a 0.9 power factor and greater than 95 percent efficiency. The district chose to bolster runtime in the units by adding extended battery modules (EBMs).

To further increase system uptime, the 9130 is equipped with ABM® battery charging technology, which relies on sophisticated sensing circuitry and an innovative three-stage charging technique to extend the useful service life of the batteries while optimizing recharge time. ABM technology also provides up to 60 days' notice of the end of useful battery service life, allowing ample time to hot-swap batteries without ever having to shut down connected equipment.

Additionally, the unit's internal hot-swappable batteries — which can be replaced without powering down the UPS — met Crothers' desire for simplified maintenance. The network engineer also values the fact that the 9130 isn't as heavy and cumbersome as other models. "The fact that they are lighter is a big deal for me," he acknowledges. "We usually have just one person trying to move these units around, and it gets difficult if you have to go find someone just to help move one UPS because it's too heavy. I can install the 9130s without having to get help."

Furthermore, the 9130's bright, front panel LCD enables easy monitoring and management, while LEDs show system status.

"With the 9130, I can see the actual load, not just some flickering lights like some other manufacturers," Crothers says.

Considering its wide array of benefits, it's not surprising that the Eaton 9130 has earned an A+ on its report card, semester after semester. The units not only ensure that WDMCS's bell system and other critical equipment operate by the book, but their simplified deployment and maintenance make Crothers' job easier.

"Overall I've been extremely happy with all four of my Eaton UPS models," he sums up. "I've now standardized on Eaton. I'll be staying with them."

Results

With the Eaton 9130 units in place, WDMCS is now able to:

- Safeguard its switches and bell system against downtime, thanks to the reliability of the 9130
- Easily hot-swap batteries without powering down connected equipment
- Increase battery service life and system uptime with ABM
- Stay apprised of system activity with the unit's easy-to-read front panel LCD

For more information, visit
Eaton.com/9130

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