



Boarding school protected by smart power equipment

Location:

Shawnigan Lake, B.C., Canada

Segment:

Education

Challenge:

In conjunction with a campus-wide renovation project, the school sought to upgrade its power protection solution with a new UPS that could provide scalability, management and reliability.

Solution:

Eaton® 9170+, ePDU, Intelligent Power® Software Suite, Service

Results:

The Eaton 9170+ — coupled with power management software, rack PDUs and service — pushed the school to the top of the class in power protection, delivering all of the benefits Shawnigan Lake was seeking in a solution.

After my research and talking to references that have Eaton products widely installed in the education and government sectors, it became pretty clear that Eaton was the best choice.

Shawn Wright, IT manager

Background

Founded in 1916 in a then-secluded west coast rainforest on Vancouver Island, Shawnigan Lake School is a co-educational, independent boarding school set amid 300 rural acres. With more than 450 students in grades eight through 12, approximately 90 percent of pupils are full-time boarders.

Offering a university preparatory-based education program, Shawnigan Lake boasts a broad spectrum of students, with 20 percent representing more than 30 international countries. The remaining 80 percent hail from Canada and the United States.

Challenge

As a part of a \$35 million renovation project, Shawnigan Lake undertook the arduous task of updating its campus structures while still maintaining the legacy and history of the buildings, many of which were constructed in the 1900s with wood framing.

In conjunction with the exterior facelifts, the school implemented a number of upgrades within its data center, including the installation of a new power protection solution. Though relatively small, the data center supports the entire

campus network, with some 30 buildings all connected by fiber. "Everything runs back to the data center," reports IT Manager Shawn Wright.

Having previously relied on APC uninterruptible power systems (UPSs), Shawnigan Lake sought a new unit that could provide greater management capabilities and more advanced software.

The school needed a unit able to deliver exceptional reliability. "We had outright failures on our data center UPSs that led me to not want to continue with the units," Wright reveals. "That is definitely not something I wanted to experience again."

In addition, Shawnigan Lake wanted a UPS capable of expanding with its growing equipment needs, as well as a manufacturer that could provide high quality and timely service.



Powering Business Worldwide

Solution

Shawnigan Lake found everything it was looking for — in a product and manufacturer — with the Eaton 9170+. “When I explored what Eaton offered, it was a dramatic improvement over other manufacturers we’ve considered,” Wright says. “They offered the right level of performance at the right price.”

Having purchased three 9170+ units, the school’s primary data center UPS is a 12 kVA model configured with N+1 redundancy. “It provides power for the entire facility,” Wright explains, “from all of our communications on campus, to network switching and servers.”

Shawnigan Lake’s second 9170+ is tasked with backing up the IT office space and service area. The third unit provides power to a variety of wiring and distribution closets.

An ideal power management solution for mission-critical applications seeking optimum reliability, the 9170+ delivers the highest level of power protection available. It eliminates single point-of-failure with N+X power and logic redundancy, and houses the logic and power within the modules, not within the enclosure, which facilitates the redundancy for the entire UPS. At the same time, the online design of the UPS completely isolates connected equipment from all incoming power problems, while a high wattage output powers more of today’s modern power supplies.

“These are the first Eaton units we’ve had,” Wright acknowledges. “After my research and talking to references that have Eaton products widely installed in the education and government sectors, it became pretty clear that Eaton was the best choice.”

Furthermore, the scalable, modular design of the 9170+ enabled Shawnigan Lake to build a solution to its exact specifications while still allowing for future growth. Although it

started with a 12 kVA unit, the school has the option of easily expanding power, redundancy and runtime as needed through the 9170+’s plug-and-play 3 kVA battery and UPS modules.

“We scaled up a bit to begin with so we don’t anticipate that we will outgrow the unit in our current data center,” Wright says. “But it’s possible if we continue to go to high density computing.”

And while the data center design allows for a separate battery cabinet to be added if needed, for now the school gains sufficient runtime from the 9170+’s internal batteries. “We require 20 to 30 minutes of runtime, which it easily provides,” Wright shares, noting that the school has a backup generator, as well. “If that generation fails, we can still function long enough to do an orderly shutdown of all services and communicate long enough to contact parents, etc. We live in an earthquake zone, so we have to plan for that possibility.”

The 9170+’s sleek tower design was also a great fit for the school, as the unit occupies minimal floor space within its data center.

Another boon for the mostly-virtualized Shawnigan Lake is Eaton’s Intelligent Power Software (IPS) Suite, which is included with the 9170+ and encompasses two software programs, Intelligent Power Manager (IPM) and Intelligent Power Protector (IPP). IPM supervisory software enables monitoring and management of multiple power and environmental devices across the network from a single interface, even integrating with the vCenter™ dashboard so users can move and control virtual machines during a power failure.

IPP protection software provides graceful, automatic shutdown of network devices during a power issue, saving work-in-progress and preventing data loss.

“The ease of management from the central console is so far superior,” Wright enthuses. “It is something we’ve never had in the past.”

Compatible with VMware®, Microsoft®, Red Hat® and Xen®, Eaton software provides all of the tools needed to monitor and manage power devices across the network, even in virtualized environments. The innovative software solution combines the most critical applications to ensure system uptime and data integrity with power monitoring and management, as well as graceful shutdown during an extended power outage.

The school complemented its power protection solution with Eaton’s intelligent monitoring and metered rack power distribution units (ePDUs), as well as some non-intelligent devices for equipment not requiring automated shutdown.

In addition to being swayed by the quality of local references — “We spoke to many longtime Eaton users in our area,” Wright reveals — the school was impressed by the quality and access of Eaton support personnel.

“We’re on an island here,” the IT manager explains, “and most companies don’t have techs here locally. With Eaton, there’s a significant installed base in the provincial government, with regular service from techs out of Vancouver. That was a big factor for us.”

In fact, the school needed assistance from Eaton before the new units were operational, after two of the 9170+ UPSs were incorrectly installed and damaged by an outside electrical contractor.

“Eaton really stepped up to the plate and went above and beyond in helping us,” Wright reveals. “We were able to get the units replaced very quickly and Eaton was very good about taking the damaged units back, inspecting and re-certifying them, and reporting on the damages, which was really above and beyond in this situation and helped us immensely.”

Results

With the 9170+ units now safeguarding campus operations, the school is achieving an A+ when it comes to high availability and uptime. Even more, it found a manufacturer it can trust for all aspects of power protection.

“We anticipate that for any new requirement, we will be putting in Eaton units,” Wright says.

With the 9170+ solution in place, Shawnigan Lake is now able to:

- Ensure high availability for its critical data center equipment, with the reliability and redundancy of the 9170+
- Easily grow the system in capacity or runtime thanks to the scalability of the unit
- Gain control and visibility into its virtualized environment with Eaton’s power management software
- Preserve the ongoing health of the unit with accessible Eaton service technicians

For more information, visit Eaton.com/9170

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