



University of Wyoming

Advanced information technology is one of the attractions for the 13,000 students at the University of Wyoming. In 2003, The Princeton Review ranked the university as the 13th-most-wired college campus in the United States, while Intel Corporation simultaneously declared it the 67th-most-unwired campus for its advanced use of wireless technology.

Background

Unreliable utility power is a fact of life at the University of Wyoming. But it can't be allowed to affect IT systems, especially when those systems are supporting IP telephony. The university's IT infrastructure, which carries both voice and data communications, includes a campus-wide network with multi-gigabyte links to each building supporting 100 megabyte links to each desktop.

Case Summary

Location: Laramie, Wyoming

Products/Services:

- Liebert Nfinity® UPS
- Liebert GXT systems

Critical Needs: Eliminate frequent battery and UPS management problems and create a reliable, high-availability infrastructure for IP telephony.

Results

- Eliminated frequent UPS failures occurring with competitive systems.
- Created solid foundation for IP telephony.
- Flawless performance during extended outages.
- Improved management of remote locations.

The Situation

The university's network access layer encompasses 109 wiring closets in more than 80 buildings. Each of these closets had UPS protection prior to the IP telephony deployment; however, the UPS systems used by the university were causing as many problems as they were preventing.

"Although we were using UPS systems from well-known manufacturers, we were never happy," says Brad Thomas, network engineer at the University of Wyoming. Thomas cited the following problems with the UPS systems the university had in place:

- Batteries failed within a few months of installation.
- Some units did not allow battery replacement, forcing the entire unit to be replaced when batteries failed.
- A minor power surge would cause UPS failure.
- The UPS systems were not shutting down cleanly, causing equipment problems when batteries failed.
- Some UPS systems would not come back online when the power was restored.
- Network engineers had to manually power-cycle the UPS systems to get them back online following a power loss.

"Keeping power in our wiring closets became a life-safety issue when we implemented voice over IP," says Thomas. "We have to provide high-nines reliability to support 9-1-1."



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*Brad Thomas, network engineer
University of Wyoming*

The Solution

The solution proved to be right under Thomas' nose: the university's main computer room was protected by a Liebert 600 UPS.

"The reliability of the Liebert UPS in our computer room was astounding," Thomas says. "We realized we needed that same quality in our wiring closets. If Liebert could give us that protection in the computer room, maybe they could do the same in the closets."

He consulted Liebert Representative AC Systems of Englewood, Colo., which recommended the Liebert GXT UPS system for the university's wiring closets.

Thomas put the Liebert systems to the test in a couple of closets. "We were so happy with their performance we began standardizing on Liebert," he says.

More than half of the wiring closets are now protected with Liebert UPS systems. As old UPS units are replaced, Liebert is expanding its presence on campus.

The university has also switched to Liebert at the network core layer, installing Liebert Nfinity systems in two of the three network equipment rooms, with plans to convert the third. The Liebert Nfinity is a scalable, fault-tolerant UPS that features intelligent power and battery modules that are able to take themselves off-line if there is a problem—without compromising system integrity.

Thomas also appreciates the communications capabilities of the Liebert UPS systems. Using the built-in SNMP card in the Liebert UPS, the university can monitor UPS systems across the campus through its network management system.

The Results

In the summer of 2004, the University of Wyoming suffered nine power outages, ranging from one to six hours in length.

“The Liebert UPS systems were absolutely perfect,” Thomas says. “We’ve not had any battery problems with the Liebert systems and we used to have that all the time.”

The batteries provided the specified hours of backup. “When they did power off, they shut down nice and

clean,” he notes.

None of the units failed, and no equipment was damaged—a major improvement compared to the systems the university had been using. “With other manufacturers, the way they shut down was almost worse than having an outright power failure,” Thomas continues.

Thomas even converted one of the largest IP telephony solutions providers in the United States, Information Systems Consulting (ISC), to Liebert. Similar to the University of Wyoming, ISC has now standardized on Liebert.

“Liebert is our sole provider of power solutions,” says Win Farnsworth, president and CEO of ISC. “We use Liebert products as a lead-in to applications where reliability is extremely important. Liebert is a great company that offers reliable products and exceptional partnering in the field. They have become a very strong partner of ours.”

Some of the ISC sales have come by referral from Thomas, who is sold on Liebert. “The value is in the reliability of Liebert,” he says. “When you consider the costs of replacing defective UPS units and fried equipment, as well as the time spent troubleshooting the older UPS systems, the Liebert systems are a bargain. With Liebert, we don’t have to worry about power issues, and that frees up time to improve service to faculty and students.”

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