



Pace University

Pace University, founded in 1906, is a private, nonprofit institution committed to opportunity, teaching and learning informed by research, civic engagement and measurable outcome. It is one of the largest universities in New York state, with four campuses located in New York City and Westchester County. It has more than 13,000 students and nearly 1,200 part- and full-time faculty, and offers more than 80 undergraduate majors, including 20 undergraduate and graduate degrees, 58 master's programs and four doctoral programs.

Background

Pace University is one of the largest universities in New York state, and its data center houses mission-critical servers, mainframe computing capabilities and networking and telephone applications. It supports all of the instructional, administrative and student body IT needs, which means students and faculty rely on their servers being operational 24 hours per day, seven days per week. When the worst case scenario happened and the data center went down, Pace University quickly thought to call the service business of Emerson Network Power.

Case Summary

Location: New York

Products/Services:

- Liebert Series 300 UPS
- The service business of Emerson Network Power

Critical Needs: Emergency service when the university experienced a complete load loss and its data center shut down at 4 a.m. on a Saturday morning. Because every university department was fully automated, it was important that the data center be back online by Monday morning when classes began.

Results

- Emerson Network Power Service Technicians arrived onsite as planned, and within four hours completed the needed diagnostics and ordered the necessary parts for the unit.
- The data center was operational by 4 p.m. Sunday, allowing students, faculty and administrative staff to be unaffected on Monday morning.



The Situation

At Pace University, data center uptime is critical, according to Peter McIntyre, director of maintenance operations at Pace University.

“Every department in the university is fully automated and our students and staff depend on our servers being operational 24 hours per day, seven days per week,” he says. “Part of my job is to prepare for worst case scenarios; you just hope they never occur.”

Unfortunately, that’s exactly what happened in the early hours of a Saturday morning.

The data center at Pace University houses mission-critical servers, mainframe computing capabilities and networking and telephone applications for the main campus as well as two other campus locations. It supports all of the instructional, administrative and student body IT needs, including email, class registration, directories, support services as well as services for the alumni and friends of the university.

So when McIntyre found out that the university’s data center had gone down, he understood the gravity of the situation and instantly realized they would have an even more serious problem if things were not fixed by Monday morning.

“My first thought was to immediately call Emerson Network Power,” says McIntyre. “We have a maintenance agreement with them and their Liebert Service Technicians have always been responsive and provided excellent service. I knew if anyone could get things back online by Monday, it would be them.”



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*Peter McIntyre, director of maintenance operations,
Pace University*

The Solution

Within four hours of the call being placed to Emerson Network Power, a Liebert Service Technician was onsite. When the technician arrived, he immediately noticed smoke in the data center. Upon initial inspection of the data center’s nine-year-old UPS unit, he discovered that its DC capacitors had exploded, taking out the power poles and scorching the wiring.

“The maintenance on the unit was up-to-date. It appeared that the issue was a result of age. The capacitor was near the end of its life expectancy,” says Robert Tudisco, New York district manager for Emerson Network Power. “This sort of thing does not happen often, but when the capacitors do fail, they fail forcefully.”

Tudisco says that service events such as the one that occurred at Pace University are the main reason Emerson Network Power is currently developing a pro-active capacitor replacement program. Available to the industry in late 2007 or early 2008, it will allow customers to purchase full capacitor replacements every five years on a standard schedule. Proactive capacitor replacement is the best way to mitigate the risk of catastrophic capacitor failure.

Upon closer inspection, the technicians soon realized they were going to need to replace about two-thirds of the main power components of the unit, including a power pole, transistors, capacitors, circuit boards, additional wires, cables and bus bars. A few of the large, permanently installed pieces of equipment that could not be switched out also needed to be repaired.

“Basically within four hours after arriving onsite, we had diagnosed the specific problem, conducted a full overview of the unit and its damaged components, and placed orders for the needed parts,” Tudisco says.

To ensure the needed parts arrived onsite as soon as possible, Tudisco and his team had to manage what would be a major logistical challenge for a weekend. Because of the time limit and the fact that some of the parts weighed more than 70 pounds, FedEx and United Parcel Service could only be used for a few of the components.

A private truck had to be used to drive a number of the larger parts from an Emerson Network Power facility



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in Southhaven, Miss. to the site within 18 hours. Some parts even came via the airport and had to be assembled onsite.

During the entire arduous process Tudisco and the Liebert Service Technicians conferred regularly with McIntyre.

“There was never any time when I did not know exactly what was happening and what our status was,” says McIntyre. “This is important, especially when facing a looming deadline that, if not met, would cause significant problems for the university.”

The Results

McIntyre admits that there were a few nervous moments during the crisis. But in the end, the Liebert Service Technicians had the UPS unit operational by 4 p.m. Sunday.

“When we experienced complete load loss and our data center shut down, Emerson Network Power responded to the emergency. They had the parts onsite and had completely rebuilt the UPS unit to get us operational by Sunday. They definitely came through for us. I don’t even want to think what would have happened come Monday morning and we were still without our servers.”

Through the course of the event, Emerson Network Power had five technicians on site, along with three support personnel. From start to finish, it took only 36 hours to diagnosis the problem; order, find and

obtain delivery of the needed parts; dismantle as much of the unit as possible; and, rebuild and test it.

The technicians also had enough time to follow standard procedure and slowly bring the unit back online at lower voltage levels and permit the new components to burn themselves in and work their way up. They allowed the new capacitor to become properly formed and charged before doing a complete restart and reapply the load to the unit.

“Every aspect of the service offered by Emerson Network Power is impeccable. From the top manager to the service technician, everyone always goes the extra mile every time we call on them,” says McIntyre. “Their service department is clearly the best.”

For more information on the service business of Emerson Network Power or Liebert technology, visit www.Liebert.com.

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