



Eaton 9390 helps Chicago thwart potential disaster

Location:

Chicago, Ill.

Segment:

Government and Military

Problem:

The city needed a robust yet compact UPS to safeguard its disaster recovery site.

Solution:

Eaton® 9390 UPS

Results:

Having purchased a 9390, the city of Chicago is able to avert any potential disaster related to power issues.

"We had previous experience with Eaton products and we liked the support and service they provide."

Amy Niersbach, platform architect

Background

With a population of nearly three million people, Chicago holds the title of being the third largest city in the United States. Its bragging rights include housing the world's largest public library, the country's oldest public zoo, the world's tallest masonry building and the world's busiest futures exchange.

Not only is Chicago home to 11 Fortune 500 companies, the city takes pride in a rich history of innovation — from being the site where Cracker Jacks was created in 1893, to seeing the first zipper created in 1896 to having the first steel-framed skyscraper constructed in 1885.

Challenge

Considering all that makes Chicago superior, it's no surprise that when the time came to invest in a disaster recovery (DR) solution four years ago, city officials wanted nothing but the best. That included a power protection solution capable of delivering the highest level of availability for the city's exchange email server and eight critical applications supported at the DR site.

"If we had a power outage in the primary data center, it could be days before we could recover everything we needed," explains Amy Niersbach, the city's platform architect. "With a proper backup solution in place, we will still have access to our exchange email and our critical applications such as 311, Oracle financials, payroll and human resources. We selected applications that would allow us to keep providing services to citizens."

To ensure that level of reliability, the city quickly turned to Eaton as the manufacturer of choice to provide the site's uninterruptible power system (UPS). "We had previous experience with Eaton products and we liked the support and service they provide," Niersbach reveals.

In addition to high availability, the city desired a UPS with robust capacity, a small form factor and remote manageability, considering the DR site is situated at an outlying building.



Powering Business Worldwide

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Solution

The double-conversion Eaton 9390 UPS proved to be the perfect solution to help the city of Chicago complete its disaster recovery efforts. Having purchased a 100 kVA unit, the city has more than enough capacity to protect its critical applications against potentially devastating power anomalies.

"We were looking for a certain size UPS and this sized our environment properly," Niersbach explains of the 9390. "It was a good fit."

With the ability to support loads of up to 160 kVA, the 9390 also provides the city of Chicago with the option of easily expanding the power protection solution if its power needs grow in the future. The unit's scalable architecture enables up to six 9390 modules to be paralleled for additional capacity or redundancy, without having to utilize a central bypass cabinet. In all paralleling configurations, each module operates independently, with the ability to deliver N+1, N+2 or greater redundancy. Because other city departments can use the DR facility to host critical applications, "The ability to expand may be important," Niersbach acknowledges.

While the 9390 is big on protection and capacity, the UPS boasts the smallest footprint of any UPS in its class — a boon for the city of Chicago since its DR site is relatively small. The 9390 also reduces installation time and costs with its small footprint and flexibility to install against walls, using top- or bottom-entry cabling. Furthermore, convenient front-panel access for all services and operation increases serviceability and reduces repair time.

Another feature that further enhances the reliability of the 9390 is the unit's exceptional battery management system, which relies on advanced battery management technology to extend battery life and optimize recharge time. In addition, the UPS's integrated battery management system tests and monitors battery health. And, while additional battery cabinets are available to significantly extend the runtime of the 9390, the city of Chicago manages just fine with the unit's internal runtime of approximately one hour, which affords Niersbach sufficient time to either cleanly power down equipment or shut down certain applications in order to extend the runtime to others.

The 9390 also delivers unmatched power performance with a high efficiency of 94 percent and output power factor of .90, lowering total cost of ownership by reducing the cost of power to support protected loads. And because the 9390 runs efficiently and produces less heat, it also lowers facility cooling costs.

For Niersbach, the 9390's remote monitoring capabilities — which provide comprehensive details on the UPS and battery system — is another significant benefit.

"The Web interface sends email notifications to me and the support team," she says. "I really like this feature because I travel between two offices. Remote monitoring and management is critical to any data center allowing access from anywhere on our network."

Niersbach receives additional peace of mind knowing the 9390 is protected by an Eaton service plan. "This is really important because if something were to go wrong, we don't have personnel that can fix it," she explains. "A UPS can be dangerous if a person is not qualified to service it, so you might as well get the best support you can."

For the city of Chicago, that support clearly comes from Eaton, which sends two customer service engineers to the site each year, one specializing in the UPS and another in the batteries.

"They're both superior guys," Niersbach says. "Four years ago when the Eaton UPS was installed, we received an onsite training class. As anyone in IT knows, if you do not use the knowledge, you will forget how to operate the UPS. The Eaton team had no problem taking the time to show us the proper procedures," she continues. "We documented four or five UPS procedures to create a user's guide for the building engineers."

Even though the city's DR site has experienced a handful of outages from utility problems and other issues, the 9390 has enabled all of its equipment and applications to power through it all. "The unit has always performed as expected," Niersbach reports. "After all the hard work we put in to keep that site up and running, it makes me feel good knowing the 9390 is there."

Results

With the addition of the Eaton 9390 to its disaster recovery efforts, the city of Chicago has continued its commitment to excellence. With the UPS in place, the city is now able to:

- Ensure 24/7 availability to the DR site and its critical applications
- Preserve valuable space with the unit's small form factor
- Expand capacity or redundancy as needed with the 9390's scalable design
- Maintain the ongoing health of the UPS with an Eaton service plan



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