Uptime Always in Sight With Eaton 9390 UPS

Product:
Eaton® 9390 UPS

Location:
Simi Valley, Calif.

Market Served:
Collocation and Web Hosting

"It allows us to scale without having to worry about maxing out our UPS … that, for us, has been the most valuable part."

- Mark McDonald, chief technology officer

Background

Since its incorporation in 1996, Siteserver has made a name for itself in the collocation and Web hosting industry, growing to support more than 7,000 customers in some 140 countries across the world. With more than half of its business generated by referrals alone, the company has earned a solid reputation for superior customer service and a commitment to delivering unparalleled availability to its collocation and web hosting clients. Siteserver also offers dedicated server configuration, data backup and Web site design.

Challenge

Ensuring the ongoing health of When it comes to maintaining continuous uptime, Siteserver has no margin for error. The organization's stringent Service Level Agreements (SLAs) guarantee 100 percent availability to collocation customers, with 99.99 percent uptime pledged to Web hosting clients. Unlike some hosting firms, Siteserver chooses to manage and maintain its own data center, keeping its network on site to allow for quick turnaround in repairing physical servers, performing upgrades and troubleshooting any hardware problems.

Because businesses count on Siteserver to keep their critical systems up and running at all times, the company requires a power protection solution that can withstand the highly demanding environment where even the slightest amount of downtime cannot be tolerated.

For many years, Siteserver relied on several Eaton 9170+ uninterruptible power systems (UPS) to safeguard its systems. But last April, as it prepared to migrate to a new HP blade system in a virtualized environment, Siteserver began investigating three-phase UPS solutions.

"We had phenomenal success with the 9170+," acknowledges Mark McDonald, the company's chief technology officer. "But the HP blade system is most efficient with three-phase power, so we wanted to upgrade our UPS to accommodate that."

In addition to a three-phase solution offering ultimate reliability, Siteserver required a UPS that was capable of being installed in a specific, dedicated spot within its data center.

"We had pre-built the space for the UPS, and then found out that a lot of vendors didn't offer a solution that could be mounted in any manner other than a row," McDonald explains. "A row solution was not going to work for us."

Solution

What Siteserver quickly discovered *would* meet all of its needs — and then some — was the three-phase Eaton 9390 UPS. Having purchased an 80 kVA unit, the company is gaining numerous benefits from the solution, which delivers a best-in-class combination of power performance, battery management, scalable architecture, flexibility, power density, and warranty and service.

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"Consolidating to a centralized UPS has been much easier," McDonald reveals. "I don't have to run around changing batteries, and there is much less maintenance involved. It's resulted in a considerable time savings."

With a double-conversion design that offers the highest level of protection available, the 9390 shields equipment from the most common power problems, including outages, sags, surges, spikes, brownouts, line noise, frequency variation, switching transients and harmonic distortion.

"It's powering about 160 HP blade systems that we use to provide services to all of our hosting and collocation customers," McDonalds reveals. "It's been tested through a few events and performed phenomenally."

For instance, when a transformer blew, causing an eight-hour blackout, "The UPS handled the failover perfectly," McDonald reports. "It switched to battery and took on the load until the generator powered on. It kept everything running throughout that event."

Without question, one of the biggest selling points for Siteserver was actually quite small: the 9390 offers the tiniest footprint of any UPS in its class — a full 35 to 50 percent less than other manufacturers' models.

"The primary factor was the footprint, and the fact that it didn't have to be mounted in row; we could mount it against a wall," McDonald emphasizes. "Overall, in comparison to competitive UPSs, the 9390 was much smaller."

The unit also provides convenient front panel access for all services and operation, a critical advantage for Siteserver. "We can gain access and do

all maintenance from the front of the unit; it does not require any back access," McDonald confirms. "That was a huge selling point."

Yet another key component is the 9390's exceptional scalability, designed to meet the demands of today's frequently expanding data center environments. In addition to easy internal scalability, 9390 models can be paralleled for redundancy or capacity using Eaton's Powerware Hot Sync® technology.

"Most importantly, it allows us to scale without having to worry about maxing out our UPS," explains McDonald, noting that the company already has plans to purchase and parallel another unit later this year. "We wanted a solution that we could put in place and not have to worry about building out our power infrastructure. That, for us, has been the most valuable part."

Siteserver is also benefiting from the 9390's high efficiency rating of 99 percent with Energy Saver Mode and output power factor of .90, which lower total cost of ownership by reducing the cost of power to support protected loads. Due to its high efficiency rating, the unit also produces less heat, which in turn lowers facility cooling costs.

"We are seeing the efficiency even more now that we're loading up the unit," notes McDonald. "We are currently at about 60 percent capacity, but the more we load, the more efficient it becomes."

Also proving vital to Siteserver is the 9390's low total input harmonic current distortion (THD) of less than 4.5 percent, which enhances compatibility with upstream power systems, especially generators.

"We found that generator sizing was much closer sized to the UPS," notes McDonald. "This was a consideration, as well, because we had an existing generator that we did not want to upgrade. With the Liebert and APC models, we would have had to upsize it right away."

To ensure the ongoing reliability of the 9390, every unit includes on-site startup service and training, a full year of 24x7 parts and labor, a service protection plan, and Eaton's eNotify Remote Monitoring Service. Providing real-time monitoring of more than 100 UPS and battery alarms, eNotify delivers monthly reports that detail the status of the 9390, including information on voltages, loads, temperature and humidity. Also summarized are the top 10 performance and environmental parameters, battery events, availability percentage, and comparative status against recommended specification. With eNotify, Eaton technicians remotely monitor both the UPS and batteries at all times. The service not only enables many issues to be resolved remotely – often before a customer even knows a potential problem exists – but will automatically dispatch a technician to the site, if needed, providing ultimate peace of mind.

"The monthly checkups and on-site visits are reassuring," McDonald acknowledges. "Knowing that the manufacturer is monitoring all aspects of the 9390 unit 24x7x365 gives us added assurance that the unit is operating properly, at all times."

Implementation

Because the 9390 is a pre-wired, integrated module, the unit was quickly and easily deployed within Siteserver's data center. Furthermore, the UPS's small footprint and flexible installation options—including against walls, using top- or bottom-entry cabling—help reduce installation time and costs.

"The installation was seamless. Eaton was able to get the unit shipped and start-up performed within the timeline of our build-out," McDonald says. "It was installed on time, it powered right up and it's been great ever since."

Result

Ultimately, the 9390 provides Siteserver with a benefit that is impossible to place a price tag on.

"There's a real peace of mind," McDonald acknowledges. "The efficiency, the convenient scalability, the reliability — everything has been great."

With the 9390 UPS in place, Siteserver is now able to:

- Meet its SLAs by ensuring high availability for customers at all times
- Provide 24x7 uninterrupted clean power to its blade environment
- Easily scale to meet future power protection requirements
- Deliver sufficient ride-through during an extended power failure until the company's generator can get up and running
- Reduce energy and cooling costs through best-in-class efficiency performance

For more information on Siteserver, please visit **www.siteserver.com**.

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