

Success Story: Samaritan's Purse



Outreach Organization Discovers BladeUPS Solution Gives Back

Product:

Eaton® BladeUPS®

Location:

Boone, N.C.

Market Served:

Outreach/Charity

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- Jeff Chandler, network manager

Background

Samaritan's Purse is a non-denominational evangelical Christian organization engaged in crisis relief and community development. Founded in 1970 and active around the world, Samaritan's Purse offers aid to the victims of war, poverty, natural disasters, disease and famine. The organization is headed by Franklin Graham, the son of evangelist Billy Graham.

Through livestock and farm projects, vocational training, and school construction and education programs, the organization helps transform families, villages and neighborhoods. At the same time, its emergency relief programs provide desperately needed assistance with food, water and temporary shelter —meeting critical needs and giving people a chance to rebuild

their lives. With community development and vocational programs in impoverished villages and neighborhoods, Samaritan's Purse strives to help people break the cycle of poverty and give them hope for a better tomorrow.

Challenge

The ability for Samaritan's Purse to implement relief missions across the globe requires the amalgamation of several key components: financial contributions to fund projects, caring individuals to execute the ventures, and food and building resources to sustain families. A less visible — though highly critical — element to the organization's success is its ability to maintain continuous access to the IT systems that facilitate behind-the-scenes business, which largely occur within the company's Boone, N.C. data center.

"This is our headquarters location, so we provide all e-mail and web services for the entire ministry," notes Jeff Chandler, network manager for Samaritan's Purse. "We also host all of our critical applications here. This site houses all of our financials, as well as our donor software system."

In 2008, as Samaritan's Purse was planning a move across campus to a new data center facility, the organization also needed to take stock of its power protection solution. Previously relying on Eaton® 9390 and 9170+ uninterruptible power systems (UPSs), the charitable firm had outgrown its existing units.

"We had run out of power," Chandler explains. "Our equipment needs had expanded so much."

In addition to a robust solution capable of delivering sufficient power to its mission-critical applications, Samaritan's Purse sought a modular UPS that would be able to expand right along with its changing equipment needs.

Reliability was also paramount. "It would be a big deal if we were down," Chandler acknowledges, adding that the Boone area can be susceptible to outages caused by thunderstorms and other conditions on a fairly regular basis. "We cannot process donor gifts or make deposits to the bank if the equipment is down."

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Furthermore, the footprint of a new UPS was a primary concern for Samaritan's Purse, which had allocated numerous racks of servers and storage area networks (SANs) within its data center. "We were looking for something that wouldn't take up much space," says Chandler.

Solution

For an organization whose entire focus is based on giving, Samaritan's Purse is grateful to have discovered a UPS that has proven to be equally generous: the Eaton BladeUPS. From its ability to meet ever-expanding power demands, to unparalleled flexibility and scalability, to industry-leading energy efficiency, the BladeUPS has addressed all of the charitable organization's backup challenges.

It was Chandler's positive history with the Eaton brand that first led him to consider the BladeUPS. "I was looking for quality, and my past experience with Eaton brought me in this direction," he explains. "I really value the reliability of the Eaton name."

Specifically designed for high-density computing environments, the BladeUPS packs 12 kW of efficient, reliable power into just 6U of standard rack space, which — unlike competitive models — includes the batteries. Having purchased two three-module, 36 kW N+1 BladeUPS systems for its four equipment rows, Samaritan's Purse is able to easily safeguard its multiple servers and SANs without surrendering a lot of real estate within its data center.

"We really liked the amount of power the UPS offered," says Chandler, "the fact that we can get 12 kW in a single unit."

Boasting the smallest footprint of any UPS in its class, the compact design of the BladeUPS offers a higher power density than competitive modular solutions, leaving more space for IT equipment.

"We compared the BladeUPS with APC's modular rack solution, and the BladeUPS took up two racks less space," Chandler points out. "That was a big deal. Space was a huge concern in this data center, as far as where we could put it."

Even more, because of its unique design, the BladeUPS can be deployed in a number of manners, from a distributed architecture with one unit in each rack, to an end of row configuration with up to six units in a rack, to a central system placed in the electrical closet rather than on the IT floor.

Samaritan's Purse is also benefiting from the BladeUPS being the most scalable backup power protection solution of its kind, with the ability to expand from 12 kW to 60 kW in a single industry-standard 19-inch rack. Because the unit's scalable architecture was designed to enable customers to deploy just the amount of backup protection needed for their existing IT requirements — and expand as needed later — Samaritan's Purse doesn't have to worry about outgrowing its system.

In fact, while the two BladeUPS systems currently operate with four modules each, Samaritan's Purse designed the solution to accommodate additional modules. "If we buy two more for each row, we can parallel three and three, and provide dual, separate power," Chandler explains.

To achieve the highest level of availability possible, BladeUPS units can be arranged in a parallel configuration using Powerware Hot Sync® technology, as Samaritan's Purse has done. Built directly into the BladeUPS, Powerware Hot Sync allows each UPS module to operate independently — yet completely synchronized with the others — eliminating any single point of failure. Furthermore, its intelligent design automatically detects parallel modules and fully configures itself for parallel operations. Up to six BladeUPS modules can be paralleled for additional capacity or redundancy.

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"We're already toying with the idea of adding two more BladeUPS modules in each row," says Chandler. "It would provide an added layer of reliability."

Samaritan's Purse is also reaping the rewards of the UPS's industry-leading 97 percent efficiency, which can save thousands of dollars in both power and cooling costs. Even operating at half load — where other UPSs typically achieve much lower efficiency — the BladeUPS performs more efficiently than competitive modular products at full load, while dissipating one-third of the heat.

"The efficiency of the unit was attractive," notes Chandler. "It doesn't really put out much heat at all."

The advantage in efficiency also helps to extend battery runtimes and produce cooler operating conditions, both of which contribute to longer component life and further bolster UPS reliability and performance.

Implementation

As cutting-edge and revolutionary as the BladeUPS is, the solution remains remarkably simple to install and service. In addition to true plug-and-power connections, the unit's hot-swappable batteries and electronics modules can be changed in minutes without interrupting power to connected equipment.

"As far as installing it, it was a breeze," confirms Chandler. "It was very easy to get into the racks. We had no issues; there was no extra drilling or anything."

Complementing the inherent reliability of the BladeUPS system is an extended service plan from Eaton, which includes semi-annual system inspections. "The service we've experienced has been great," notes Chandler. "Every single service technician we've had out here has been professional and competent."

The regular preventive maintenance completed on the units provides Samaritan's Purse with additional peace of mind. "We just want to make sure the batteries are up to snuff and everything is working as it should," explains Chandler. "We don't want anything that could possibly be a failure point."

Result

Since the BladeUPS units were deployed, the UPS systems having been giving back to Samaritan's Purse just as they were expected to — delivering ultimate availability. "During testing there were times when someone tripped the power, but they always performed well," Chandler says of the units.

With the UPS system in place, the company is now able to:

- Ensure the continuous availability of its critical servers and SANs
- Easily expand its power protection solution in a cost-efficient manner to accommodate future growth
- Preserve valuable data center space with the UPS's high power density and rackmount deployment
- Maintain unparalleled reliability, thanks to the inherent design of the BladeUPS, coupled with regular maintenance check



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