



NetAlliant Technologies

NetAlliant Technologies is a managed service provider that offers a range of services, including application hosting, colocation, disaster recovery, IT consulting, systems integration, patch management, virus management and protection, and web hosting.

Background

NetAlliant must have peace of mind that its customers' servers will be fully protected against any power loss or damage. Unfortunately, the local utility in its hometown of Chattanooga, Tenn., has not kept pace with the revitalization and strong growth the area is experiencing, resulting in an over-stressed power grid and daily power disturbances.

Case Summary

Location: Chattanooga, Tenn.

Products/Services:

- Liebert FS Flywheel Energy Storage System
- Liebert Npower 80 kVA UPS with Bypass Panelboard

Critical Needs: Assure the success of managed services provider by delivering 100 percent power availability.

Results:

- The data center has experienced zero power-related downtime since the new power system was installed.
- Battery maintenance and replacement costs have been eliminated through the use of flywheel energy storage system.
- Liebert UPS and flywheel technologies have already been selected for the company's new data center.

The Situation

NetAlliant manages nearly 100 Citrix file, print, and application servers along with SQL and Exchange servers that process legal, medical and other industry specific data. In the past, it has experienced first-hand the damaging effects caused by interrupted power. The power quality and instability of the local power grid can threaten the operation of customers' critical computer equipment without a high level of power protection.

"A majority of our customers are multi-million dollar medical and legal companies that absolutely cannot go down," says NetAlliant President John Smith. "Their servers and data must be accessible 24x7x365 without exception. We do not take power availability for granted. A META Group report noted that power glitches can cost healthcare organizations more than \$10,000 per minute in lost revenue."

When evaluating its current backup power equipment, NetAlliant's technical team discovered that the battery-based UPS systems it was using were not up to the task of assuring 100 percent power availability. In fact, many of the lead-acid batteries were "blowing-up" and leaking acid, posing a threat to nearby hardware as well as the health and safety of technicians. Making matters worse, the UPS units were not triggering alarm notifications for battery replacement.

"We were very surprised and disappointed as we purchased these systems from the brand leader in single-phase UPS systems and thought the product quality and reliability would be there," Smith says.

Smith worked closely with his director of support services and his electrical/mechanical engineer to find a technology that was more reliable and didn't have the high cost and frequent maintenance associated with



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NetAlliant Technologies*

batteries. Based on their research, they decided to go with an innovative battery-free approach to backup power — a flywheel-based UPS system. After evaluating numerous systems, they selected Emerson Network Power's Liebert flywheel-based UPS system.

"We were very interested in the potential reliability, efficiency and cost-savings offered by flywheel technology," Smith says. "Emerson Network Power has a solid reputation for innovative solutions. The more we learned about the Liebert flywheel energy storage technology, the more confident we were that it would be more reliable and efficient, and less expensive over the long haul."

The Solution

The local Liebert application specialist recommended an 80 kVA Liebert Npower UPS paired with the Liebert FS Flywheel Energy Storage System.

The Liebert FS Flywheel Energy Storage System provides DC ride-through power and voltage stabilization during utility power disturbances when used in conjunction with the UPS. The advanced Pentadyne flywheel technology used in the equipment enables a single unit to deliver 67 kW of ride-through power for up to 37 seconds with the 80 kVA Liebert Npower UPS.

According to the Electric Power Research Institute, 98 percent of all outages last less than 10 seconds. During any outages lasting significantly longer, the Liebert Npower UPS seamlessly transfers to NetAlliant's 250 kVA diesel generator.

Instead of using hazardous chemical reactions to store energy, the flywheel system stores kinetic energy in a quiet, spinning, composite flywheel cylinder to provide a reliable and predictable source of power. Unlike lead-acid batteries, the Liebert FS requires minimal maintenance, is temperature-tolerant and easily withstands outage cycling of hundreds of thousands of events without degradation. It provides superior performance without the high cost of ownership and environmental impact associated with batteries.

The Results

Since installation of the new system in January 2006, NetAlliant's servers have been unaffected by an average of 25 to 50 power disturbances per quarter hitting its utility input line.

"Once we went operational with the new system, the only way we know we have power problems is by viewing historical data of power events," says Cris Beagle, NetAlliant's director of support services. "Also, we have not even had to touch the equipment. Its low maintenance and long operating life gives us a huge return on our investment."

Because the Liebert FS has such a broad operating temperature range, it does not require a controlled environment. This, combined with the fact that it weighs less, has a smaller footprint and is 10 times more energy efficient than other flywheel-based equipment, allowed NetAlliant to make it a centerpiece of its data center.

"We placed the UPS and flywheel out in the open so we can bring customers to our offices to see the system. Having this level of protection assures our customers and prospects that we take power protection seriously and that their servers are protected 24x7x365 against whatever the utility throws at us," Smith says.

Smith has been so pleased with the performance of the equipment that he decided to use the same Liebert equipment in the company's second data center, currently under construction in Nashville.

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