



Cellwatch gives hospital immunity against battery failure

Location:
Birmingham, Ala.

Segment:
Health Care

Solution:
Eaton® Cellwatch, 9390 UPS,
Power Xpert 9395 UPS, Service

Problem:
To avoid any possibility of unplanned downtime, the hospital needed a highly reliable UPS solution and the ability to ensure its numerous battery strings remained healthy at all times.

Results:
Eaton's UPSs, complemented by Cellwatch technology, offer the perfect Rx for the hospital, providing daily battery monitoring and the highest level of power protection.

"In essence, the Eaton solution takes care of all of our kids, and that's the reason we're here. ...I can't tell you how much I appreciate Cellwatch because it just does so much."

Rex Hendrix, supervisor of engineering

Background

Ranked among the best pediatric medical centers in the nation by US News & World Report, Children's of Alabama has been providing specialized medical care for ill and injured children for more than 100 years. Patients come from every county across Alabama, as well as from numerous other states and foreign countries, comprising more than 677,000 outpatient visits and 15,000 inpatient admissions last year alone.

The only medical center in Alabama dedicated solely to the care and treatment of kids, Children's of Alabama encompasses more than 2 million square feet, making it the third largest pediatric medical facility in the U.S. The private, not-for-profit medical center also serves as the primary site of the University of Alabama at Birmingham's pediatric medicine, surgery, psychiatry, research and residency programs.

Challenge

Despite advances in modern day power protection solutions, many customers operating large systems such as Children's of Alabama remain vulnerable during a power failure. That's because the banks of lead acid batteries responsible for maintaining critical loads have long been regarded as the most susceptible part of any uninterruptible power system (UPS), with battery failure ranking as a leading cause of power-related downtime. In fact, 75 percent of unplanned outages can be attributed to battery failure. As such, the more customers know about the health and status of their batteries — and the more detailed and current that information is — the better their chances of thwarting disaster.

It is a risk taken very seriously at Children's of Alabama, where a wide variety of UPSs are tasked with ensuring continuous uptime to a range of critical equipment within the hospital, from essential IT and networking devices to MRI machines to the entire telephone system.

"If the MRI went down while a patient was in it, the consequences would be very costly," acknowledges Rex Hendrix, the hospital's supervisor of engineering.



“Not only would we have to reschedule the patient, reboot the machine and start all over again, we would lose all of the data going to the MRI. Having reliable emergency power to make sure we preserve all of that data is extremely important.”

Similarly, unexpected downtime would significantly impact other vital operations across the site. “If we lose power to our telephone/electrical room (TER), we lose all telephones and computers in the building,” Hendrix says. “That would obviously be a major problem.”

Solution

Thankfully, Children’s of Alabama doesn’t have to worry about a downtime disaster. Not only is the organization’s equipment safeguarded by a team of Eaton 9390 and 9395 UPSs, but the hospital’s numerous battery banks are monitored daily by Cellwatch technology.

Approximately 15 years ago, Children’s was introduced to Eaton through the Blackmon Agency, a local Eaton manufacturers’ representative. Ever since, the hospital has trusted Eaton to support its critical processes, while relying on the Blackmon Agency to advise how to maintain the UPS equipment. Then, in 2011, the Blackmon Agency demonstrated what a great fit the Cellwatch battery monitoring system could be for the hospital.

“I am a huge fan of Eaton’s monitoring capabilities,” Hendrix confirms. “We have seven UPSs spread over three buildings that all have Cellwatch on them.”

Considering that a string of batteries is only as reliable as its weakest link, and because VRLA batteries can fail quickly, the only way to ensure a UPS will support the load during an emergency is with daily battery monitoring. Eaton’s Cellwatch, an automated monitoring system for large-scale installations, does just that. The technology enables Hendrix to quickly identify and isolate battery issues long before a failure occurs, delivering prompt notification of potential

vulnerabilities and often detecting problems months before they pose a risk to operations.

The powerful tool provides an unprecedented view into the current health of the hospital’s UPS batteries, with easy-to-use data. As a result, Hendrix has instant access to battery status, with Cellwatch providing a simple view and clear indication of a good or bad cell or jar. Cellwatch also monitors and displays the status of generator, switchgear and communications gear batteries in the same user interface with UPS batteries. Having relied on Cellwatch for the past five years, the hospital has been able to sidestep costly downtime due to unexpected battery failure, enhance overall system reliability, ensure business continuity and safeguard company assets.

“I can’t tell you how much I appreciate Cellwatch because it just does so much,” Hendrix enthuses. “The beauty of the system is I can look at this and see what’s going on 24 hours a day. The ability to watch our batteries is so valuable because our biggest fear is that if our emergency power failed, we need to count on our batteries to carry us through.”

It’s a concern that is certainly justified. “There have been two instances when our emergency power failed on us, both of which were attributed to human error,” Hendrix shares. “But both times, our batteries kept everything online. They will keep us up and running for about 30 minutes, which is usually enough time for us to find the problem and resolve it before we go black.”

Even more, Cellwatch helps Children’s of Alabama boost its bottom line — slashing preventive maintenance costs while increasing safety since battery life is extended by knowing exactly when replacement is needed.

“Every time a battery starts getting a problem, Cellwatch sends me an email,” Hendrix explains. “Plus I can get on computer or iPad and pull up the system wherever I am. I’ve had times when I’ve had as many

as three or four batteries in one UPS going bad, and that would be a huge problem if I didn’t know about it,” he continues. “One bad battery will start affecting all the batteries next to it if you don’t do something.”

With at least two or three strings of 40 batteries attached to each Eaton 9390 and 9395 unit, the UPSs are responsible for delivering unparalleled availability to critical systems across several different hospital buildings, including the IT department, MRI room and a pair of telephone / electrical rooms.

“The beauty of the Eaton UPSs is that if you have two or three battery strings with 40 batteries, each string has its own main breaker,” Hendrix says. “So if you get a notification that there’s a problem, you can go in and turn off one string. You may lose those 40 batteries but you still have 40 more as a backup, and they can carry you through if something happens. That’s not the case with a lot of other manufacturers.”

Hendrix also has high praise for the maintenance-friendly Eaton 9390 and 9395 units. “It’s easy to make repairs, to change batteries out, or put them into maintenance bypass mode,” he reveals. “A lot of other UPSs are not so easy to work on. “We hope to have another brand new Eaton UPS in here, hopefully in the next year.”

Children’s of Alabama gains ultimate assurance knowing the ongoing health of its UPSs is preserved through an annual service plan executed by the Blackmon Agency. “The service technicians come out once a year and look at everything,” Hendrix notes. “Unless we have a problem, and then they’ll come immediately whenever we call. This most definitely gives us peace of mind.”

Furthermore, Eaton has been attentive in addressing the hospital’s logistical concerns of monitoring batteries across three separate buildings. Service Manager Brian Tenters, along with local field engineer Roger Ballard, have been hands on both in resolving any issues and keeping the Cellwatch system functional at all times.

Results

Thanks to the reliability afforded by the Eaton UPSs and Cellwatch, Children’s of Alabama doesn’t have to worry about power maladies and instead, is free to focus on what it does best: helping to ill and injured children to heal.

“In essence, the Eaton solution takes care of all of our kids,” Hendrix sums up, “and that’s the reason we’re here. We want all of those kids to get better.”

- With its comprehensive Eaton solution in place, the hospital is able to:
- Ensure continuous uptime and availability to all critical systems with the Eaton 9390 and 9395 UPSs
- Gain detailed battery status health information on a daily basis using Cellwatch
- Mitigate and prevent costly downtime by assessing battery information at any given moment
- Keep system performing optimally with regular checkups provided through a service plan

For more on mission critical power solutions, visit Eaton.com/powerquality

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

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