



## Innovative, mobile infrastructure empowers Acxiom's unparalleled service

**Location:**

Conway, Ark.

**Segment:**

Data Center

**Solution:**

Mobile UPS trailer with Power Xpert 9395 UPS, PredictPulse Insight, lithium-ion battery cabinets, Eaton ATS, Eaton switchgear

**Problem:**

Acxiom needed to upgrade its data center power protection infrastructure but did not have the luxury of shutting down operations

**Results:**

The UPS trailer has enabled Acxiom to experience zero downtime, loss of production or broken Service Level Agreements (SLAs) for clients

*"The Eaton trailer has allowed us to keep the IT load supported during the project and prevented our clients from experiencing any downtime or loss of production."*

*Jim Thompson, expert facility engineer/  
senior team lead critical facilities*

**Background**

Acxiom is a leading database marketing company with locations across the globe. The organization provides its clients with identity resolution to help them connect data to consumers in a privacy-compliant way; data to understand and engage consumers; and a wide range of service offerings to help brands, agencies, and their technology partners harness data to improve every customer interaction.

**Challenge**

Like many of today's data center operators, Acxiom faced an increasingly common—and yet complex—dilemma: the need to upgrade existing power infrastructure within critical facilities without halting operations to do so. An additional challenge for Acxiom and many other modern data center operators is insufficient space to install new equipment without first physically removing the old. That's why, for nearly a decade, Acxiom has relied on renting temporary mobile power trailers designed by a pair of Eaton agents.

"We don't have enough room to install a new UPS system and transfer the existing load to it," explains Jim Thompson, Acxiom's expert facility engineer and senior team lead, critical facilities. "When we first started looking at replacing our UPS systems, the greatest challenge was how we could perform the required work with the least impact to our clients. Our biggest hurdle was how to keep the IT load supported during the project and not cause any downtime."

That task was especially critical recently, as Acxiom prepared to replace all of its Eaton® 9315 uninterruptible power systems (UPSs) across eight data center buildings at the company's Conway, Ark., facility. The six-month-long process required a powerful, highly reliable UPS that could support Acxiom's capacity and uptime requirements when the 9315 units were removed.



Powering Business Worldwide

## Solution

Rolling into action—literally—was a brand new, completely customized mobile Eaton UPS trailer. The self-contained UPS-system-on-wheels was specially constructed to support critical infrastructure facilities during upgrades or disaster recovery efforts.

“This system allows Axiom to maintain business continuity during their entire upgrade process,” explains Martin Bosch of Olathe, Kansas-based Air Power Consultants, who co-owns the trailers with partner Marc Basche of Global Power Supply in Reno, Nev. The two reps custom-built the solution from the ground up with data center upgrades in mind. “Others just modify a semi-trailer,” Basche explains. “We built our trailers specifically for this application.”

Indeed, the 52-foot-long mobile trailer integrates a complete lineup of state-of-the-art equipment, including a 1200 kW Eaton Power Xpert 9395 High Performance UPS; Eaton PredictPulse Insight monitoring software; Eaton automatic transfer switches and switchgear; battery cabinets from LiiON; and Marvair HVAC. With a hurricane-rated roof, R32 insulated factor, and all wiring neatly and efficiently organized within a sub floor, the trailer is a showpiece in itself.

“Once people see it, they just fall in love with the technology,” Bosch reveals.

The only mobile unit on the market available at a capacity of 1200 kW, the solution is also the first of its kind to offer lithium-powered batteries. “Nobody else is using it,” says Basche, “but it’s a huge benefit. Not only does lithium-ion increase reliability, but the dramatically lower weight of the batteries make the trailer highly transportable.”

In fact, the mobile station’s six battery cabinets weigh in at just 7,200 pounds—more than five times less than the 40,000-pound lead-acid alternative.

“Lead-acid batteries pose a great challenge from a physical footprint and weight standpoint because the trailer is not transportable without first removing the batteries,” Bosch adds. “In the trailers where lead-acid is used, we have to remove all of the batteries and ship them separately, then reinstall all of them on site. Obviously, this adds a lot of time and expense.”

Another differentiator in the new trailers is the addition of the 9395 High Performance UPS, which provides double-conversion efficiency of up to 97 percent and boasts redundant modules built into the system. “Competitive UPSs don’t offer inherent redundancy,” Bosch points out. Furthermore, the 9395 is certified to perform with the LiiON-brand lithium-ion battery cabinets, which Bosch says is a huge advantage. “Everything works together seamlessly,” he emphasizes.

That includes PredictPulse Insight next-level monitoring and management service. Shifting power monitoring from a reactive to a proactive model, PredictPulse Insight collects and analyzes data from connected power infrastructure devices, providing Eaton with the insight needed to make recommendations and take any necessary action on behalf of the customer. The first cloud-based analytics service for data center infrastructure that can actually foresee the failure of power components, PredictPulse Insight provides real-time status information, time savings and peace of mind that the entire power infrastructure has a second set of eyes on it.

With the service running via a wireless modem on the trailer during the upgrade project, Axiom is relying on it as a backup alarm system in conjunction with its own internal system. “It’s an added benefit to the customer knowing that we’ve got their backs,” Bosch says of the monitoring solution. “It just gives them that much more reliability having the trailer equipped with a full communications package.” The wireless modem also allows PredictPulse Insight to run without ever connecting to the client’s secure network, which eliminates possible user security concerns

Eaton automatic transfer switches and switchgear round out the state-of-the-art solution, which has been attracting attention from data centers operators coast to coast. In fact, both trailers are already booked out well into next year.



The mobile UPS trailer from the outside looking in.

## A jewel in the industry

Clearly, the mobile backup station is meeting a vital need in today’s mission-critical data center market. “There are so many customers with legacy equipment who want to take advantage of newer technology such as higher efficiency UPSs with greater reliability, but they don’t have the luxury of shutting down operations for three months,” Bosch explains. “They don’t even want to shut down for three hours. So, we started making these trailers 12 years ago with the goal of providing a tool that customers can use to complete an upgrade and maintain business continuity in the process.”

The first unit, built in 2006 and just recently retired, was actually assembled inside a huge shipping container with an Eaton 9315 UPS. Bosch and Basche then constructed four mobile UPS stations by modifying semi-trailers, which are still in operation. Then, in 2017, the pair seized all the knowledge they had gained over the years, combined with the latest technological advancements, and simultaneously custom-built two 1200 kW trailers from the ground up.

The trailers even have the capacity to be paralleled together if a customer chooses. “Nobody else in the industry can do this,” Bosch reports, adding that he and Basche will have four additional trailers available in this size range by 2019.

After designating the first trailer “Brutus,” Bosch and Basche have bestowed each subsequent mobile unit with an internal name, always after a Greek God. The two newest trailers are fittingly deemed Hercules and Goliath.

Over the years, when outfitting their trailers with equipment, the pair has chosen to rely on Eaton for a multitude of reasons. “They make ultra-reliable, robust products that differentiate themselves from competitive solutions,” Bosch emphasizes. “Plus, Eaton is very responsive as a company, and has a nationwide presence and a reputation for reliability that really lends credibility.”

Indeed, that reliability is underscored at Axiom, where the temporary trailer is successfully allowing the organization to house its power infrastructure outside the facility while the legacy equipment is removed, thereby creating the space needed to install the new equipment. “The Eaton trailer has allowed us to keep the IT load supported during the project and prevented our clients from experiencing any downtime or loss of production,” Thompson emphasizes.



Eaton switchgear inside the UPS trailer

## Results

As Acxiom continues to replace the UPSs in its Conway data center, Thompson credits the Eaton trailer for a completely smooth transition, noting that the company has experienced zero downtime, loss of production or broken Service Level Agreements (SLAs) for clients.

“It has worked excellently for us on all of our projects by allowing us to replace UPS systems without impacting our clients,” Thompson says, noting that more trailers are without question in Acxiom’s future. “We still have additional 9315 UPS systems to change out.” “We just roll from one to the next,” adds Bosch.

With the Eaton UPS trailer in place, Acxiom and other data center operators are now able to:

- Keep IT loads completely supported during projects/upgrades with zero downtime
- Remove existing equipment to make room for new infrastructure without any loss of production
- Save time and money, thanks to the trailer’s lightweight lithium-ion batteries
- Monitor and predict any impending failures within the entire power infrastructure using PredictPulse Insight



Power Xpert 9395 UPS with lithium-ion battery cabinets

Learn more about remote monitoring at  
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 Printed in USA  
 Pub No: CS153085EN / GG  
 January 2019



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