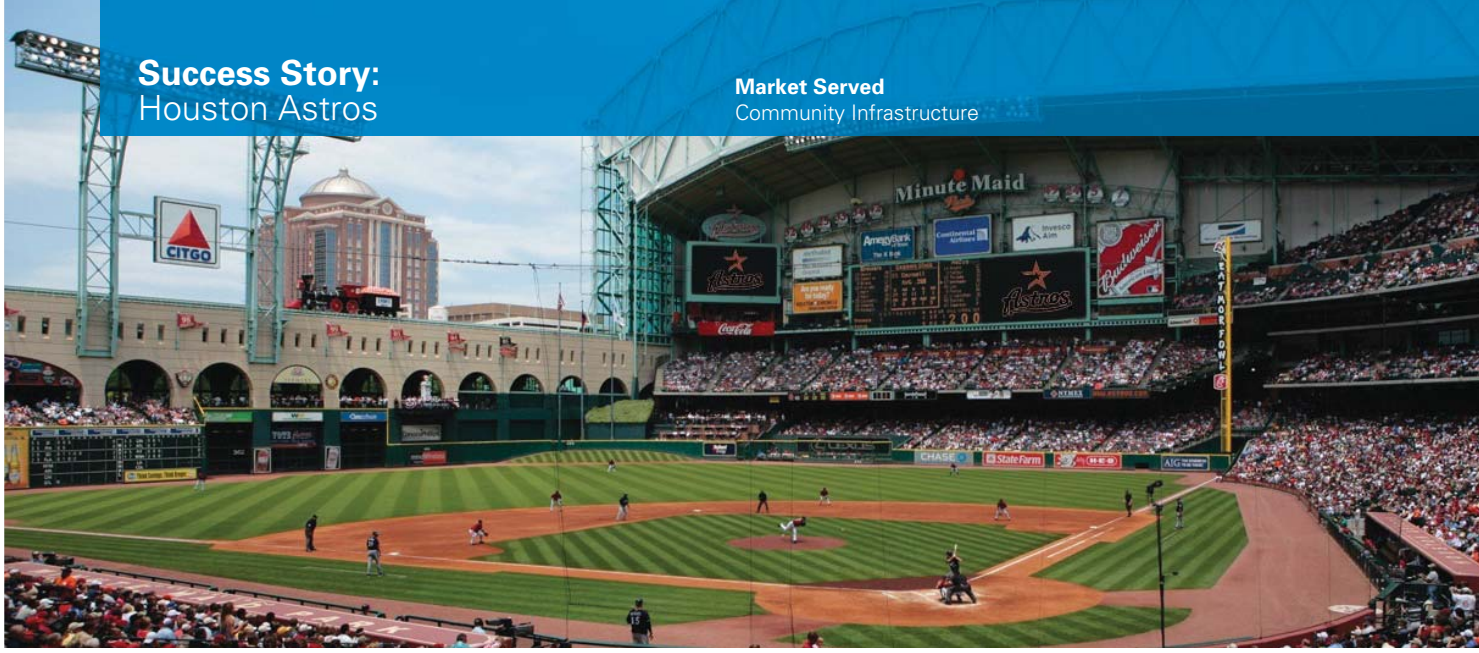
Success Story:
Houston Astros

Market Served
Community Infrastructure



Eaton 9155 a big hit with the Houston Astros

Location:
Houston, Texas

Segment:
Stadium

Problem:
Need for a highly reliable UPS was essential.

Solution:
Relied on Eaton's 9155 UPS to protect against all nine of the most common power problems.

Results:
High availability of its critical networking equipment, guaranteed continuous uptimes, ability to add capacity in the future, efficient green design and small footprint, extend runtime as desired with optional EBMs.

"We can do a software upgrade on the UPS at any time to get more kVA. If we were to outgrow this particular solution, then we just upgrade to a 15 kVA with the software."

Michael Hovan, Network Administrator
Houston Astros

Background

Located in the heart of downtown Houston, Minute Maid Park is home to Major League Baseball's Astros franchise. Combining the feel of a classic old-time park with the amenities of a modern venue, the stadium has scored big points with fans for its focus on technology.

Minute Maid Park was not only the first major sports facility to feature a closed-captioning board for the hearing impaired, but the stadium also provides Wi-Fi capabilities. Fans can bring their Wi-Fi compatible devices to the ballpark during games and surf the web for a nominal fee. In addition, a state-of-the-art video board provides baseball enthusiasts with unmatched instant replays, as well as special video features and effects unlike any other stadium in Major League Baseball.

Challenges

It is the technology behind the scenes at Minute Maid Park that is as important to the Astros' overall success as league-leading batting averages and stellar pitching. That's why, in 2009, the organization changed its entire game plan with regard to power protection. With the stadium's data center supporting numerous servers, switches, routers and other critical networking devices, the club's need for a highly reliable uninterruptible power system (UPS) was essential.

"If we were to have a power outage and we didn't have a reliable UPS, it would shut down our entire company," acknowledges Michael Hovan, network administrator for the Astros.

Indeed, the club relies on the integrity of its power protection solution to ensure the continuous operation of all business systems, including ticket sales, accounting, e-mail, payroll and event reservation. "Basically, every single tool that we use," says Hovan.

In prior seasons, the team had fielded several smaller UPS units – a rotation that wasn't working well for the organization. "Previously, I had six different units running everything in the room," explains Hovan. "I not only had to worry about replacing the batteries in each UPS, but we were also outgrowing the solution."

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In addition to a larger, more robust unit, the baseball club was scouting for a centralized UPS that would be easier to manage. Furthermore, having launched the Play Green™ campaign the previous year – which is committed to Earth-friendly initiatives in the greening of sports movement – the Astros hoped to invest in an energy-efficient power protection solution. "We wanted a solution that was as green as possible," Hovan confirms.

Footprint was also a key factor. "Space was a major concern," Hovan reveals. "The only spot I had to put it in was only about two or three feet wide. I didn't have many options."

Although the Astros had been investigating the purchase of a new UPS for some time, the club was ultimately forced to make a quick trade when one of its prior units was threatening the ability to maintain continuous uptime.

"We had been looking for a better solution for awhile, as we knew the other one was just limping along," Hovan acknowledges. "Then we started having complete failures off one unit in particular, and that's what put some real urgency to it."

Solutions

The Astros organization discovered grand-slam power protection when it added the Eaton 9155 UPS to its roster. Available in 8, 10, 12 and 15 kVA models, the unit's online design completely isolates equipment from utility power to protect against all nine of the most common power problems, including outages, sags, surges, spikes, brownouts, line noise, frequency variation, switching transients and harmonic distortion.

At the same time, its high 0.9 output power factor delivers more power than the vast majority of competitors' models, enabling the 9155 to power more equipment than other UPSs of equivalent VA rating. "We really wanted to centralize into one unit, so that was really important to our being able to achieve that," Hovan says.

The centralized solution has significantly eased management and maintenance hassles for the network administrator as well. "I don't have to run around changing all of the batteries and checking all of the units anymore," he notes.

The Astros also scored with the 9155's space-saving design, which offers high power density per square foot. The sleek tower model measures just 12 inches wide and 33 inches deep – half the size of most other units on the market today. Even more, unlike competitors' models, the 9155's design includes the batteries.

The ball club opted to bolster its runtime capabilities by adding an extended battery module (EBM) to the 9155, which has the potential to achieve up to four hours of backup time. Through Eaton's exclusive ABM® technology, the UPS significantly extends battery service life over competitive models, which use conventional trickle-charging. ABM, on the other hand, relies on an innovative, three-stage charging technique that offers prolonged rest periods between charge phases, as well as temperature-compensated charging to optimize recharge time.

Thanks to the 9155's scalability options, the Astros organization was able to sign the 9155 to a long-term contract. Having purchased a 10 kVA UPS – which met their immediate power protection needs – the club can easily grow the solution if their equipment needs expand in the future.

"We can do a software upgrade on the UPS at any time to get more kVA," Hovan explains. "If we were to outgrow this particular solution, then we just upgrade to a 15 kVA with the software."

Furthermore, because the innovative design of the 9155 offers high efficiency across all load ranges, it plays perfectly into the Astros' green initiative. In addition to lowering utility costs, the 90 percent efficiency rating allows the unit to run cooler, thereby extending component life.

Finally, the UPS's low total harmonic distortion – which makes it exceptionally friendly to generators – was clutch for the baseball franchise, which relies on a generator for backup power.

The Astros supplemented the new UPS with an Eaton ePDU®, which provides the ability to measure power consumption and oversee power distribution within the data center – from a comprehensive overview down to an individual server. The technology provides an understanding of power distribution in the rack for load balancing, load segmentation, efficiency and energy consumption calculations, while also allowing the user to fully monitor, switch, sequence and manage individual outlets.

Complementing the Astros' power protection solution is a ConnectUPS Web/SNMP device, which enables convenient monitoring and management of the UPS with a standard Web browser, while simultaneously providing graceful shutdown for multiple computer systems over the network.

"It's very nice to be able to control the servers remotely while monitoring the environment," says Hovan.

Results

It's been nothing short of a perfect game since the 9155 was installed at Minute Maid Park. "The UPS helps me sleep better at night," Hovan says. "I no longer have to worry about things shutting down."

With the 9155 now part of the Astros team, the organization is able to:

- Ensure the high availability of its critical networking equipment
- Guarantee continuous uptimes for its wide range of business operations
- Easily add capacity to the UPS if the club's equipment needs grow in the future
- Contribute to the Play Green campaign with the 9155's efficient design
- Preserve valuable data center real estate with the unit's small footprint
- Extend runtime as desired with optional EBMs



Eaton 9155 UPS

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Eaton Corporation
Electrical Sector
8609 Six Forks Road
Raleigh, NC 27614
800 356-5794
Eaton.com/powerquality

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December 2010

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