



World-class facility gains world-class power protection solution

Location:
Austin, Texas

Segment:
Data Centers

Problem:
The collocation provider's brand new data center required a solution that could meet its high demands for performance, efficiency, cost and support.

Solution:
Eaton® 9395, ESS, VMMS, Service

Results:
Hefty utility savings from high efficiency, paired with exceptional reliability and maintainability, have made the 9395 a perfect fit for the world-class facility.

"We project savings of \$15,000 per year due to ESS."

Ed Henigin, CTO

Background

Since 1994, Data Foundry has been providing comprehensive wholesale and retail data center outsourcing, colocation and disaster recovery services. The company offers its customers secure, premium facilities for servers and equipment, emergency workspace and carrier-neutral network accessibility, supported by experienced onsite technicians and customer support 24/7/365. Data Foundry supports more than 1,000 enterprise customers across a variety of industries including energy, healthcare and financial services. The first Internet Service Provider in San Antonio and one of the first 50 Internet Service Providers in the United States, Data Foundry currently operates data centers in Austin and Houston, and owns private networks in Austin, Houston, San Antonio and Dallas.

Challenge

Building a data center from the ground up was an exciting venture for Data Foundry, which opened the doors to its new Austin based "Texas 1" facility in June 2011. "We designed a world-class facility with demanding requirements for performance, efficiency, costs and support," reveals Ed Henigin, Data Foundry's CTO. Yet such a high-profile location needed a power protection solution capable of guaranteeing the maximum level of availability. For Data Foundry, unplanned downtime translates to lost customers. "We need to protect our colocation customer-critical IT equipment, along with facility support staff and servers," Henigin explains.

So Data Foundry set out to uncover and deploy the ultimate uninterruptible power system (UPS). "We conducted an industry evaluation of several UPS vendors," Henigin explains, noting that key criteria included reliability, maintainability, support, efficiency and cost. "We evaluated several solutions and chose Eaton."



Powering Business Worldwide

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Solution

It's no surprise that Data Foundry selected the 750 kVA Eaton 9395 UPS, considering the unit's unprecedented combination of power performance, reliability and efficiency. In fact, the 9395 delivers the highest level of reliability and availability on the market — in part due to its inherent redundancy option, which allows the unit to be configured so its uninterruptible power modules (UPMs) automatically act as N+1 redundant systems.

For Data Foundry, the system's reliability has been repeatedly tested — and passed with flying colors.

"We have performed testing numerous times where we roll back and forth between utility and generator, and sometimes those require the utilization of UPS power to bridge between those power sources," Henigin says. "The UPSs have worked flawlessly."

The company has also been impressed with the efficiency of the 9395, which operates at greater than 94 percent efficiency and contributes to Data Foundry's green efforts — reducing utility costs, creating cooler operating conditions, enhancing reliability and extending the overall life of the UPS components.

"Our customers also have green initiatives that we help them to achieve through our efficiencies," Henigin reports.

As a colocation provider, Data Foundry is ever-conscious about making the most of every square foot.

As such, the 9395's small footprint— up to 60 percent less than competitive units — was a boon for the company, as the unit occupies minimal real estate in its data center. Furthermore, as Data Foundry's power needs increase, the 9395 can be expanded in building-block increments by adding additional modules, eliminating the need to purchase a new UPS. This advantage not only contributes to the solution's maintainability, but is especially valuable to Data Foundry since the company's customer base is constantly on the rise.

"Our colocation services are growing rapidly, and we will be expanding at the Texas 1 property, as well as at other sites, following the demand from our customers," Henigin reveals.

In addition to its impressive lineup of features, the 9395 is also helping Data Foundry save thousands of dollars per year in utility costs. Because inefficiencies in UPSs are a significant contributor to rising energy costs, data center managers are always hunting for ways to conserve. Yet while the efficiency of a typical UPS generally ranges from 94 to 95 percent, that rating plunges as the load decreases. And because the majority of IT systems use dual bus architecture to achieve redundancy, most UPSs are supporting loads of less than 50 percent, and often as little as 20 to 40 percent.

Yet even small increases in efficiency can translate to thousands of dollars in savings, resulting from the ability to achieve more real power while lowering cooling costs — outcomes that Data Foundry has experienced since deploying Eaton's Energy Saver System (ESS) and Variable Module Management System (VMMS) technology.

ESS enables the 9395 to attain an industry-leading efficiency level of greater than 99 percent, making it the only technology on the market capable of yielding such results. Using ESS, the UPS intelligently adapts to utility power conditions while supplying clean power to the connected equipment. Even more, because UPSs using ESS maintain 99 percent efficiency even when lightly loaded, the technology can deliver gains of up to 15 percentage points in efficiency over traditional models in the typical operating range.

In fact, the energy savings from Eaton's ESS typically recovers 100 percent of the cost of the UPS cost over just a three- to five-year time period. At a 250 kW load, for example, the savings represents \$4,000 per year per point of efficiency gain. "We project savings of \$15,000 per year due to ESS," Henigin reveals.

Data Foundry also utilizes Eaton's VMMS technology, which optimizes overall system efficiency even at low load levels. With VMMS, the UPS system sets redundant power modules to ready state, enabling the remaining power modules to drive the load with higher efficiency. When the load increases again and more power modules are needed, the system shifts the load into additional modules immediately. VMMS adapts both to a single UPS consisting of multiple power modules and to larger, multiple UPS parallel systems.

"We enjoy the utility cost savings of VMMS," Henigin says.

To ensure the 9395 performs optimally well into the future, Data Foundry bolstered its level of protection with an Eaton service plan, which includes regularly scheduled preventive maintenance on both the unit and the batteries. "They're the experts," Henigin says of Eaton.

Results

The Eaton 9395 incorporates all of Data Foundry's power protection prerequisites in a single solution: reliability, maintainability, efficiency, support and cost. With the 9395 in place, the colocation company is now able to:

- Ensure the highest level of reliability within its data center
- Shave more than \$15,000 per year off utility bills, thanks to ESS and VMMS
- Protect customer assets while contributing to their green initiatives with the unit's efficiency
- Preserve valuable data center space with the 9395's compact footprint



Eaton 9395

Eaton Corporation
Electrical Sector
1000 Cherrington Parkway
Moon Township, PA 15108
USA
877-ETN-CARE (877-386-2273)
Eaton.com

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