Eaton enables both lean operations and rapid growth

Location:
Montreal, Quebec, Canada

Segment:
Colocation

Challenge:
As the newly formed company constructed its Tier 3 data center from the ground up, it required a UPS with the highest level of availability, redundancy and efficiency, as well as a top-notch service provider.

Solution:
Power Xpert™ 9395 UPS, Energy Saver System, Remote Power Panels, service

Results:
Eaton® and the 9395 UPS answered the call for all of the colocation company's needs.

Eaton's solutions align with a state-of-the-art facility like ROOT Data Center to help establish itself as an industry leader…

Jason van Gaal, founder and chief executive officer

Background

ROOT Data Center is a next-generation colocation provider offering premium services for less than the cost of power. The $20 million Tier 3, carrier neutral, 500-server rack facility is strategically located near downtown Montreal. As the first data center provider in the city to deploy a next-generation cooling technology, ROOT is able to offer colocation for 30 to 70 percent less than other providers.

Challenges

When it comes to delivering exceptional services, ROOT Data Center has an authority in its founder and chief executive officer, Jason van Gaal. The CEO brings with him the vast knowledge and expertise gained from having previously launched and operated Granite Networks, another successful Canadian colocation company.

Among van Gaal's winning plays at his prior company was selecting a power protection solution from Eaton. So when it came to choosing an uninterruptible power system (UPS) and related power equipment for the new ROOT facility — which opened its doors in September 2014 — Eaton was on van Gaal's radar.

"My experience with the Eaton products and the service they offer was certainly part of the initial consideration and kept them in the running for the new data center," he explains. "But as part of this build out, we also reexamined the market to see what new technologies had come out since we purchased the last UPS. Our research showed that Eaton was still the technology leader."

ROOT required a UPS offering double-conversion, online technology, complemented by exceptional service from the manufacturer. In addition, the company desired a highly efficient unit, as well as one that would not occupy a lot of valuable real estate on the data center floor.

"Obviously, space is expensive so it was important to have a UPS with a small footprint," van Gaal explains.

Finally, ROOT needed a UPS capable of operating within a 415/240-volt environment, ROOT's method of achieving greater efficiency and additional cost savings to customers.

Solution

With the help of Eaton, ROOT Data Center became the first colocation facility in the Montreal region to establish a highly efficient, high-density 415/240-volt power management platform. To properly safeguard equipment, lower costs and enhance energy efficiency, the firm selected the Power Xpert™ 9395 UPS and Remote Power Panels (RPPs).

"After carefully considering a number of power solution providers, we found that Eaton stood out among the competitors,

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offering an extremely versatile product line combined with premium service capabilities," van Gaal explains. "Eaton's solutions align with a state-of-the-art facility like ROOT Data Center to help establish itself as an industry leader with advanced service features for enhanced efficiency, reliability and modularity."

The 9395 can be configured so its uninterruptible power modules (UPMs) automatically act as N+1 redundant systems, bolstering reliability. Traditional UPS manufacturers cannot deliver this supplemental protection without adding a second UPS.

Furthermore, unlike some other UPS technologies, the 9395's dual-conversion design completely isolates output power from all input power anomalies and delivers 100 percent conditioned pure sine wave output — regulating both voltage and frequency.

The 9395 not only facilitates maximum uptime, it is able to operate at up to 99 percent efficiency using Eaton's ground-breaking Energy Saver System (ESS). ESS delivers savings of up to 15 percentage points in efficiency over traditional models in the typical operating range. The technology is part of Eaton's Energy Advantage Architecture, which provides capabilities for IT and facility managers to maximize the performance of their UPSs.

"When aggressively targeting high efficiency in a colocation facility, you need advanced power distribution and management solutions that can adapt to customer needs," van Gaal points out. "It's great to have double conversion online technology with upwards of 98 percent efficiency."

In addition to its industry-leading energy savings, the 9395's 415-volt output capability was a standout for ROOT.

"Part of what led us to Eaton is we really liked the design of the 9395," van Gaal explains. "We wanted to roll out a 415-volt distribution solution and the Eaton UPS was capable of that. It enabled us to eliminate transformers and improve our

efficiency, allowing us to save about 5 percent on the total cost of build, while increasing overall efficiency by about another 3 percent."

The unit's multi-module, scalable architecture of the 9395 allows data centers to adapt to future changes in load demands and new requirements for high reliability without requiring the purchase of an additional unit.

"With this unit, we won't get stranded for capacity," van Gaal notes.

The Eaton UPS footprint is the smallest and lightest of any UPS in its class – 50 to 60 percent less than competitive units.

ROOT complemented the 9395 with high efficiency Eaton RPPs, which provide high power density in a choice of two cabinet sizes. The small footprint of the standard RPP is perfect for space-cramped facilities or an end-of-row distribution solution, boasting an industry-first high kAIC rating. The rack-style RPP provides seamless integration into data center white space by matching standard IT rack dimensions and allowing for even easier installation with improved wiring and service space.

Eaton's RPP power distribution solutions are designed to deliver 30 kilowatts (kW) of power to each rack within ROOT's facility. The Eaton configuration is engineered to help reduce power distribution costs by more than 20 percent and improve data center efficiency by as much as 10 percent over other local colocation providers, according to van Gaal.

Furthermore, ROOT relies on Eaton's Power Xpert Gateway PDP Card that ties into the company's Open Source software. "I like that the SNMP output function can monitor everything on our central monitoring system," van Gaal says.

ROOT Data Center has also found value in Eaton's corrective and preventive maintenance service offering, which helps ensure its mission-critical equipment remains running at all times.

"Eaton's large local presence and responsive services assist us in maximizing reliability and scalability to meet customer needs, while also playing a key role in our ability to maintain uptime per customer service-level agreements and position us as an industry pricing leader," van Gaal says.

If a problem does arise, the CEO can rest assured it will be resolved quickly. "The mean time to repair is excellent," he explains of Eaton service, noting that when a rectifier issue occurred at his previous company, a technician was on site immediately.

"The engineer was there within two hours to make the repair," van Gaal recalls. "It was fantastic. I was very pleased with the work."

The CEO also praises Eaton's quick product turnaround and delivery time.

"We don't always know when a customer is going to deploy or expand," van Gaal explains, adding that he envisions ordering up to 30 RPPs for the data center.

"We have one client right now who wants 375 kilowatts in six weeks. We intend to use Eaton across the board as we scale, so the inventory standardization has really helped us."

With numerous customers having signed up for service before the data center even officially opened — and several other large clients on the verge of inking contracts — ROOT is already eyeing the establishment of a second facility.

"The demand has been stronger than expected," van Gaal acknowledges. "Using this equipment, we have been able to achieve rapid growth for our organization. Overall, I think Eaton does a great job in supporting our lean operations model, which enables us to compete on a global scale."

Results

Thanks in large part to the Power Xpert 9395 and RPPs, ROOT Data Center is achieving all of the goals it set for its state-of-the-art facility, including providing clients with exceptional colocation services at a lower cost. "Eaton has done a terrific job for us from a support perspective, and the UPSs have performed very well," van Gaal confirms.

Indeed, with the Eaton solution in place, ROOT is able to:

• Ensure continuous uptime and high availability

• Reap great utility savings with the highly efficiency UPS

• Preserve valuable space with the 9395's small footprint

• Quickly and easily expand its power protection solution due to UPS scalability

• Maintain the health of the UPS and ensure quick resolution of any issues with Eaton service

The touchscreen display is another UPS feature ROOT Data Center leverages to make critical data easy to access and manage.

For more information on the Power Xpert 9395, visit: **Eaton.com/9395**

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