



Monthly mailer from Emerson Network Power

September 2007

DID YOU KNOW...

...that Emerson Network Power and Dell release Energy Smart Solutions that increase data center performance while lowering energy usage by 40%?

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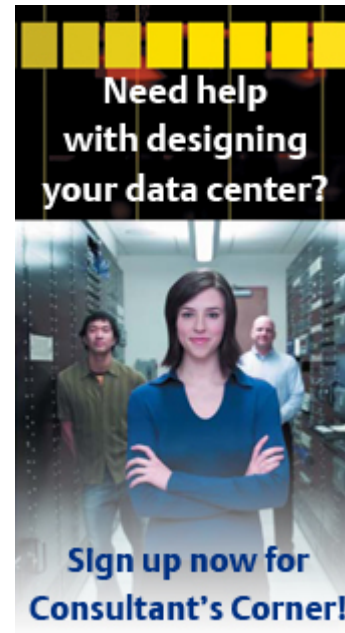
...that in order to increase their Data Center Availability and Operational Efficiencies, Emerson Network Power integrates its monitoring and service offerings via Monitoring and Professional Service group?

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GROWTH DRIVERS:

According to the Uptime Institute, the energy required to power and cool \$1,000 worth of server equipment has significantly increased from 8 watts in 2000 to 109 watts today. In the best-case scenario, within five years it could take 157 watts to run the same \$1,000 worth of hardware; in worst case, 1,650 watts.

SOURCE: NetworkWorld
(<http://www.networkworld.com/news/2007/041007-how-green-data-centers-save.html>) Stephanie Overby, CIO, 04/10/07



Enabling an Energy-Efficient Data Center

As the demand for highly available data and network infrastructure increases at an accelerated rate, companies are bringing data center energy usage into focus. And not without reason. Today's trend necessitates 24X7 information availability, round-the-clock commerce sites, on-demand services, increasing use of high-performance servers and storage in data centers- all of which inevitably lead to higher power consumption, resulting to skyrocketing electricity costs. If left unchecked, power and cooling issues and costs are likely to become data centers' worst nightmare.

IDC reported that IT power usage rose to 6.8 kW in 2006 from 1 kilowatt (kW) per rack in 2000. Adam Braunstein, senior research analyst of the Robert Frances Group, also revealed through the July 2006 CIO Insight Magazine that up to 40 percent of data center operating costs could be power- and cooling-related expenses. With this in mind, strategies to achieve a significant reduction in power consumption and comprehensive data center power and cooling solutions shouldn't be on the back burner for a data center manager.

BEST PRACTICES TO REDUCE POWER DEMANDS

At the heart of this issue is the fact that IT equipment accounts for the lion's share in energy consumption. A variety of approaches can considerably solve the issue on skyrocketing power consumption:

- **CONSOLIDATION and VIRTUALIZATION.** In some cases, this approach results to a 10-to-1 reduction in the number of servers required through the use of fewer servers and where applications run on virtual machines.
- **PROPER SEALING OF THE DATA CENTER ENVIRONMENT.** The use of a vapor barrier that isolates the controlled environment from the building environment helps to control humidity levels in

a data center.

- **AIR FLOW IMPROVEMENTS.** Whether it's setting up racks using the hot-aisle/ cold-aisle arrangement, ensuring that power and Ethernet cables are not obstructing air flow and the use of high-voltage power strips or power distribution units within each rack, the end result is optimized air flow within the data center.
- **ECONOMIZERS.** The use of economizer systems that taps outside air to help cool data centers can result to a 13% savings in energy use.
- **COOLING SYSTEM OPTIMIZATION.** To optimize cooling system efficiency, it makes sense to look at how efficient the units operate at partial load and remove sensible heat as compared to latent heat, and how well multiple units work together.

There are significant opportunities to improve efficiency in data centers. In many cases, relatively simple and immediate improvements as opposed to radical changes can pay immediate dividends. This is not to say that a strategic and long-term plan for addressing energy efficiency issues should be dismissed as this is equally important to ensure that we receive the maximum benefits that IT initiatives promise while keeping energy issues at bay.



White Papers

1. Five Strategies for Cutting Data Center Energy Costs Through Enhanced Cooling Efficiency

This paper presents five strategies for increasing data center cooling efficiency. At best, when these measures are integrated into a data center's power usage system, they could result to 34-40 percent in cost reduction while generating significant, recurring savings.

[Download this white paper](#)

2. Using Virtualization and Digital Control Technologies to Increase Data Center Operating Efficiency

Other than issues on how to optimize for operational readiness, availability, and risk management, the biggest challenge among data center professionals stems from the need for a framework within which data center professionals can manage their entire suite of hardware and software assets in a real-time, cost/risk-optimized manner.

[Download this white paper](#)

3. Working towards a More Energy-Efficient Data Center

As companies are faced with increasing demands for more power that leads to skyrocketing electricity costs, it is imperative that companies look for ways to reduce electrical usage and costs.

[Download this white paper](#)

Customer Testimonial



Congratulations to the winners
of 1GB USB drive!

Name	Country
Diosdado S. Lopez	Philippines
Howard A. Cena	Philippines
Ir. B. P. Tan	

Equinix, leading global provider of network-neutral data centers manages high power density customer in data center with Emerson Network Power

Equinix has chosen a new cooling system from Emerson Network Power Australia to cool high-density computer equipment at its Sydney Internet Business Exchange™ (IBX®) center.

Equinix, which provides data center space for over 180 companies, chose Emerson's Liebert-branded eXtreme Density (XD) cooling system, the first deployment of its kind in Australia, to meet the cooling requirements of a high power density customer.

"We had a situation where the additional heat, generated by high power density equipment, in a relatively small area would create a 'heat zone' that affects the temperature balance of the entire IBX," says Doug Oates, Managing Director of Equinix Sydney. "Traditional raised floor cooling alone was insufficient to cool the high-density equipment of our customer and the temperature imbalance could translate into lower cooling efficiency and higher energy costs."

[Click here for the full story](#)

John Giraud	
Peter de Hoog	Australia
Rick Nelson	Australia
Shravan Kumar Byroju	Australia
Sunil H Gaoli	India
Tuki Hanxhiu	Australia
Virendra Bhanushali	India

Product Feature

Next Generation UPS For High Availability Power Needs and Low Cost of Ownership

Emerson Network Power Liebert NX is the Next Generation of true-online, double conversion digital UPS designed to meet the high availability power needs of a wide variety of applications. It combines innovation and simplicity and low cost of ownership..

[Click here for more information on Liebert NXe](#)



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