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## **Green IT finds favor among Indian firms**

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INDIA--Driven by the need to lower energy costs and consumption, businesses in the country are now starting to look at ways to reduce their dependency on power.

"Most of the Indian corporations including the government offices, are very receptive to the use of energy-efficient computers in their enterprise," R. Ravichandran, Intel's South Asia director of sales, told ZDNet Asia in an e-mail interview.

Rajesh Janey, vice president of enterprise business at EMC India and SAARC, concurred: "Power deficiency is adversely affecting the Indian economy. And organizations are increasingly becoming concerned about reducing their environmental footprint."

India is facing a power shortage of 70,000 megawatt (MW). As a result, to maintain power supply, much of corporate India has had to rely on generators that run on diesel and cause pollution. And with the soaring crude price, Indian enterprises are faced with escalating energy bills.

Ravichandran said: "Although the desire to create a greener planet will drive some implementations, the primary driver for green IT adoption in Asia-Pacific is the cost savings provided by higher energy-efficiency."

According to a report by Springboard Research, at 37 percent, large enterprises in Asia account for the largest electricity consumption for computing in the region. They are followed by consumer IT users at 34 percent, and the SMB (small and midsize businesses) and small office/home office (Soho) segment at 29 percent.

"It's encouraging to find most IT vendors increasing their efforts in the green IT space," Ravichandran said.

### **Cooling data centers -**

According to estimates from research house IDC, the world is estimated to spend US\$10 billion powering data center this year. In addition, spending on power and cooling data center is estimated to grow at eight times the rate of spending on hardware.

The Bureau of Energy Efficiency, which is a statutory body under India's Ministry of Power, estimates that, by 2015, India will need 20,000MW to power data centers.

According to EMC's Janey, modern servers have increasingly become the computing equivalent of gas-guzzling SUVs (sports utility vehicles). While a typical server 10 years ago consumed 100W of power, the average server today consumes four times as much power.

Servers use about 30 percent of their peak electricity consumption while in idle mode, and 80 percent of the time, servers are sitting idle. "Imagine your SUV guzzling gallons of gas while sitting in the garage," Janey said.

This has prompted Indian companies to adopt virtualization.

"Companies across segments in IT and IT-enabled services (ITES) in India have been early adopters of consolidation and virtualization," Sanjiv Kapur, senior vice president and head of Patni-BPO, told ZDNetAsia in an e-mail interview. Patni Computer Systems is an Indian company providing IT services. "At Patni, almost 50 percent of our data centers are virtualized," Kapur said.

A recent IDC India survey estimated that 22 percent of servers were virtualized in 2007, and projected this would increase to 45 percent by end-2008.

"The virtualization trend is fast catching up in India," Kapur said. "Most of the leading companies in India are proactively looking at server consolidation, virtualization as well as improved cabling architecture."

Today, Indian companies have an array of green computing alternatives to choose from, with large IT vendors including Intel, EMC, IBM and Microsoft, offering more energy-efficient and environment-friendly products.

Intel recently unleashed the Atom processor built for low-power mobile Internet devices, as well as its second-generation quad-core Xeon processor 5400 designed to offer greater energy efficiency and the multitasking performance necessary to maximize virtualization efforts.

EMC also recently announced a next-generation version of its Power Calculator, designed to analyze and project the power consumption of EMC products. The vendor is touting the tool as a way for organizations to accurately estimate their power and cooling requirements, and alter configurations to meet optimal power provisioning.

Janey said: "For every workload moved from a physical to virtual environment, customers can save about US\$290 in electricity costs and about US\$360 a year in cooling costs." With proper software and an energy-efficiency overhaul, EMC's corporate data center in Massachusetts, United States, achieved US\$3.5 million in cost savings.

According to Ravichandran, Intel's use of virtualization and grid computing enabled the company to save US\$30 million in 2007 in capital purchases. "Since 2006, we have seen an 11 percent increase in server utilization, which will allow Intel to save approximately US\$77 million in 2008 capital purchases," he said.

### **Building green architecture**

Patni Computer Systems recently unveiled its first green center in Noida, India, called Patni Knowledge Centre.

The center has a climate responsive architecture, and features more green area and the use of natural light. It deploys solar heating, recycles waste and uses drip water irrigation. The building also has carbon dioxide sensors, adding fresh air when air quality drops. "Our green Knowledge Centre is designed to use less energy, water and natural resources as well as create less waste," Sanjiv Kapur, senior vice president and head of Patni-BPO told ZDNet Asia. The center will consume 20 percent to 30 percent less water, and save over 47.5 percent in energy consumption.

Patni is currently constructing two similar environment-friendly buildings in Pune and Hyderabad. "Green buildings are a significant step toward saving energy, typically saving 35 percent to 50 percent of electricity, compared to a conventional building in India," Kapur said. He added that while green buildings require between 5 percent and 7 percent additional investment, the cost can be recovered within 24 to 30 months, he added. "Adoption of green buildings is still in nascent stages in India," he said, noting that there are currently only 26 green buildings in the country.

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