ROI: Extending the benefits of energy efficiency

WHAT'S GOOD FOR THE ENVIRONMENT CAN ALSO MAKE INCREDIBLY GOOD BUSINESS SENSE. BY TAKING ADVANTAGE OF GREEN IT STRATEGIES SUCH AS VIRTUALIZATION AND SERVER CONSOLIDATION, MIDSIZED BUSINESSES CAN REALIZE IMMEDIATE ROI IN 2009. WHAT'S MORE, TODAY'S ENERGY-EFFICIENT TECHNOLOGIES DO MORE THAN JUST ALLEVIATE POWER AND COOLING COSTS. GREEN IT SOLUTIONS CAN ALSO HAVE A SIGNIFICANT IMPACT ON COMPANY-WIDE OPERATIONAL EFFICIENCY.

Facing the rising costs of business

Running a midsized company today calls for doing more with less—while also keeping up with the technology curve to remain competitive. Yet supporting new IT services often means increased costs in hardware, maintenance and power. As time goes on and energy costs continue to rise, many companies start to run out of physical space, or overload the power and cooling capabilities of hardware facilities from small computer rooms to large data centers.

So while many companies pursue green agendas, capacity issues often become the foundation for adopting energy-efficient IT technologies.

Explains Logan Scott, IBM energy efficiency offering manager, "If we keep growing with the current model—a very distributed IT model where a lot of companies are running one application per server—that is not really going to be sustainable. That's where we are seeing server sprawl. And even on the storage side it is just becoming too difficult to keep up with the increasing demand for storage capacity."

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Energy-efficient IT for efficient operations

There are many reasons for midsized businesses to go green, according to Scott. "First of all, there is a major opportunity for cost savings," he says. Energy-efficient IT strategies that focus on consolidated, virtualized infrastructures can help midsized businesses quickly begin seeing a return on investment from reduced power and cooling costs of up to 40 percent.

In addition to these welcome adjustments to the utility bill, energy-efficient technologies also can provide significant operational benefits. In areas such as data availability, productivity and utilization, green IT

usually makes organizations more efficient, Scott explains. "Companies are seeing major efficiency…for every dollar they are saving in energy costs, they might see six to eight dollars in operational cost savings," he says.

For example, consolidated, virtualized environments can reduce demands on power and cooling systems, which can help eliminate thermal hot spots that often lead to service outages, says Scott. This improved availability and resiliency helps to ensure that business is uninterrupted. And, because consolidated server environments simplify IT management, midsized organizations can also manage more services with fewer resources. This also improves IT staff productivity by reducing the amount of time required to contain server sprawl and battle power and cooling issues.

Companies can also effectively get more out of their IT investments by harnessing energy-efficient IT to improve utilization as much as fourfold, says Scott. "Today, in a lot of distributed environments, utilization rates of the server environment might be down to less than 15 percent, so that is a lot of wasted compute power," he explains. "By implementing virtualization you can share workloads on the same equipment and drive much higher utilization rates, and likewise get a lot more efficiency—including energy savings."

Going green for lower costs and ROI

The first step in energy-efficient IT for midsized business is to learn more about how they currently use energy, which can be difficult to discover. At some organizations, for example, utility bills are passed through a facilities department, which effectively masks energy costs from IT teams that may be unaware of how much power information technology consumes.

"Working with the facilities department," Scott explains, helps in "understanding the overall energy consumption for IT and then putting the capability in place to monitor and manage the energy consumption."

Doing so can often be easily achieved by downloading freely available basic energy-monitoring software applications—while more advanced solutions allow businesses to control and cap energy usage by setting server-based policies. These tools also can lay the groundwork for measuring energy ROI as midsized businesses progress further down the path to greener computing.

For Scott and many other IT energy experts, understanding energy usage requirements should be followed up by consolidating physical servers onto less hardware with a virtualized infrastructure—regardless of the size of the facility. Scott says of this environment, "I think that is one of the biggest levers for improving the efficiency of the overall IT operation, which is going to likewise reduce the facilities overhead in cooling that environment down."

As Scott recognizes, some smaller businesses may not yet be ready for virtualization. Still, these businesses can also benefit from consolidation and more efficient server designs. As an example, he suggests that simply transitioning from traditional rack-mounted servers to energy-efficient blade servers can cut energy costs by up to 40 percent. Similar benefits can be found in the storage environment.

"Implementing a tiered storage environment with information lifecycle management policies—where you're optimizing where data is stored in the hierarchy and you are taking advantage of slower-spinning disks and tape—that can really have dramatic improvements in energy efficiency," he notes.

Framing the future of green IT

Virtualization and consolidation are just starting points in making technology greener and more cost-effective. As business and environmental goals converge, advancements in energy-efficient technology will drive more savings—and operational efficiency, according to Scott.

"I think we will see more energy management functions built into servers and storage hardware," he explains, and then lists areas such as cloud computing and software as a service. These advances, he says, are poised to further extend the benefits of green IT for midsized businesses by increasing utilization rates for hardware, and allowing hardware devices to run more workloads with less power.

But in the meantime, Scott and other IT energy experts believe there is no time like the present for midsized organizations to go green. Because what's good for the environment also makes good business sense in 2009—and beyond. ●

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