

EXPERTS' FORUM | Technology

Green IT: Solutions That Save Money

Most businesses have taken some steps to go green, whether it be setting sleep timers for their computers or printing in color only when necessary. While these small steps make a difference – especially in tight economic times – businesses have opportunities to use energy-efficient technologies to produce steep savings.

For many businesses, the savings start with servers. They take up space and require a sizable energy expense. The Environmental Protection Agency estimates that servers accounted for 80 percent of the total IT load and 40 percent of total data center power consumption in 2006.

Through server virtualization, businesses can operate more than one server on the same piece of hardware and manage multiple servers from a central location. At Marco, we consolidated 15 servers to three servers and have plans to move another five to a virtual server.

Certainly, server virtualization is good for the environment and saves space. But organizations of all sizes are consolidating their servers because of the clear ROI.

Here are three ways it delivers savings:

- **Lower energy costs:**

Over the next five years, businesses are expected to spend as much on energy for their data centers as they do on hardware, according to technology research firm Gartner Inc. Every virtual server saves 7,000 kWh of electricity and delivers an 80 percent reduction in total energy costs on average.

- **Less hardware demands:**

Server virtualization reduces hardware costs by 50 percent. This combined with lower energy costs saves businesses \$3,000 a year for every server that they consolidate. Firms can reduce the number and types of servers by 10 to 1.

- **Optimize utilization:**

Most servers operate at about 5 to 15 percent of their total capacity. Through server virtualization, that increases to up to 80 percent. While server virtualization is not a new concept, it certainly has improved its functionality and applicability.

VMware, a long market leader, now competes with a new product line from Microsoft. That competition is expected to provide even better performance at a lower price. In addition to server consolidation, businesses have moved to thin client computing to protect the environment and their bottom lines.

Through thin client computing, firms replace their desktop PC with a thin or zero client. This moves the complexity of operating and maintaining desktops to the data center where IT staff can more easily manage and maintain the equipment.

Thin clients usually contain no hard drives and minimal hardware and software. A thin client only requires a monitor, keyboard, mouse and small appliance to network to a terminal server or virtual server as mentioned above. Thin client computing significantly reduces energy consumption. A desktop typically uses between 70 and 150 watts of power. A thin client slashes that to closer to 15 watts and some models use as little as 7 watts in full operation.

When businesses go green through server virtualization or thin client computing, they do not have to sacrifice their bottom line. These eco-friendly solutions provide a sizable financial return.



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