

Use Existing Assets To Reduce Energy Costs

By Jose Iglesias

These are challenging times for data centers. Never before have data center managers had so many mission-critical applications to support, such stringent service level agreements (SLAs) to meet, or more complex infrastructures to manage. Given these circumstances, it would be understandable to put green IT projects and initiatives on the backburner.

There are several ways in which companies can lower energy costs and fulfill green mandates. Better yet, a number of these approaches can be implemented within an existing infrastructure. As a result, data center managers can begin to address their green initiatives now while reducing energy costs.

Keen on Green

At any given moment, the world consumes 15 trillion watts of energy. IT is a big energy user, drawing four percent of that amount, with analysts projecting new usage to double in the next five years. With energy prices soaring, regulations demanding lower consumption, supply dwindling, and environmental concerns mounting, the push to going green makes economic sense.

Most IT organizations are actively pursuing a green plan. Companies are no longer seeking green initiatives merely to cut costs. Many are considering green technology because it will reduce pollution. They are also willing to pay for technologies that promise to cover power bills.

Environmental and energy cost considerations call for IT to conserve energy using a variety of approaches. Organizations that can afford the related expense and downtime may opt to redesign their data centers. Others may choose to invest in an upgrade to hardware that may initially be costly but will save money in the long run because it is more energy efficient.

Perhaps the most economical yet compelling approach to greening is to simply do more with existing IT resources. Organizations can take the guesswork out of this approach by first leveraging the free energy ROI tools that are now available. These tools can help organizations quantify energy consumption and expenditure reductions, as well as carbon footprint reductions. These tools may also provide a means for modeling and comparing different approaches for deployment, integration and operations to determine the most effective option for an organization. For example, they can reveal the benefits of replacing aging equipment or of tiering storage. Once organizations have quantifiable data from which to base their green decisions, they can then determine which activities are most appropriate for their environment.

Reduce, Reuse, Recycle

There are several ways to meet green objectives through better utilization of existing resources. One of the most effective and cost-efficient is to use software to change the way energy consuming IT assets are used.

For example, an estimated 40 percent of IT equipment energy consumption is due to desktops and laptops. Organizations that can automate energy conservation on these systems will see measurable benefits in lower energy use. Software as a service may also help reduce energy demands by enabling the use of thin clients or netbooks, which require less power.

Software can also be used to optimize servers, which also consume a disproportionate share of energy in the typical IT infrastructure. Configuration management software can help administrators adapt configurations to standards for energy efficiency by discovering these systems and their dependencies and tracking their changes. Virtualization can also aid in energy efficiency by enabling IT to use fewer physical servers while requiring less supporting infrastructure and providing more room to future expansion. However, in order to maximize the benefits of virtualization, organizations must be able to manage virtual systems with the same tools they use for their physical servers.

High-availability clustering software is another effective tool for reducing energy consumption. By obviating the need for dedicated spare servers, clustering tools take a roaming spare approach to high availability and disaster recovery and eliminate the incremental energy costs of powering and cooling idle high-performance systems.

With storage volumes growing, energy-conscious organizations must also find ways to accommodate increasing amounts of data without adding more storage hardware. Organizations can address these seemingly conflicting needs by identifying and reclaiming unused storage, eliminating the storage of duplicate data, and tiering storage. Because these software practices enable better utilization of existing storage assets, they also produce sustained energy savings.

As organizations continue to pursue green IT initiatives, they can take advantage of a growing number of tools that enable them to reduce energy use and costs by improving how their existing assets are used. With a software-based approach that provides quick time-to-value, organizations can reap measurable returns on their green investments now and in the future.

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