

Get into 'save power' mode

Green IT is not about buying a lot of jazzy 'green' hardware. It is about **holistic efficiency**, through 'virtualisation' amongst other options.

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Concerns over global warming, energy conservation, and social responsibility are leading to an unprecedented amount of media coverage about all things that need to go "Green". Not only is there increased press coverage but environmental protection issues are also gaining much more visibility with IT managers too.

Going Green can be both environmentally responsible and cost-efficient for the enterprise. A successful Green initiative increases the availability of IT infrastructure and will also help reduce costs for the enterprise. It can also be a platform to bring in a new level of discipline in IT provisioning and management.

WHY GREEN?

IT has been on an unsustainable path for years. Huge data centres feeding on electricity, millions of computers burn up processor power performing background processes, many a time while their users are in meetings; add to it piles of e-mails, and documents needlessly printed off and never read.

If these factors alone are not reason enough to sign up to green IT, there are countless more. Many UK and EU regulations and campaigns demand greener businesses. Employees are increasingly 'green aware' and want to see their company contributing to the solution, rather than exacerbating the problem. Sooner rather than later, someone — your boss, a big customer or a government agency — is going to want to know what you're doing to comply with, support or advance your company's efforts to become more environmentally responsible.

DATA CENTER AT THE HEART OF GREEN IT

Green IT is a means of increasing energy efficiency of the IT hardware. IT data centres and other assets. Since IT consumes very large quantities of renewable and not so renewable resources such as silicon and platinum, a big part of Green IT also implies reducing electronic parts waste. IT also con-

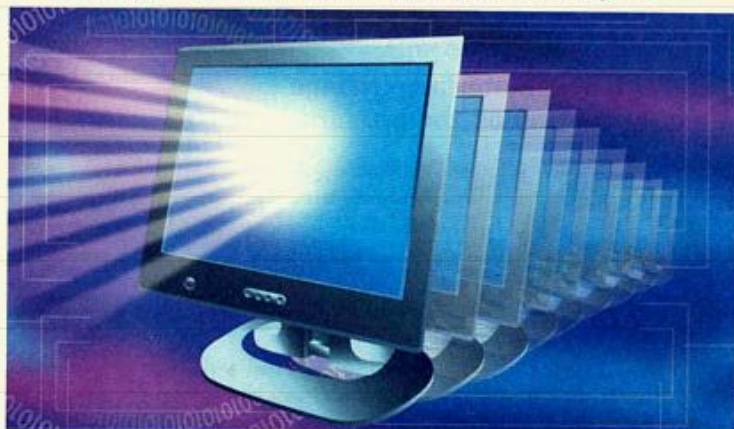


Illustration: Satishesh Velupillai

sume space on the planet and data centres. Thus, Green IT also means reducing the data centre footprint on the environment.

While 'Green' IT merits a long discussion, here we can perhaps focus on the heart of the issue today, which lies inside the data centre of an enterprise.

The data centre is often the engine that drives the growth of the enterprise, and energy efficiency is the key there. According to a recent AFCCOM Data Centre Institute survey, 50 per cent of every dollar spent on a new server goes into the energy to power and cool it. The Lean & Green consortium predicts that by the end of 2008 the cost of powering a server may even exceed the cost of the server itself.

In fact, as per some reports, data centres

consume between 1.5 per cent and 3 per cent of all the power generated annually in the US — at the high end, that's equivalent to the electricity needed to power the state of Michigan for one year.

Therefore, power management is a key aspect to achieving a green data centre. Simple acts such as turning off unused lights, PCs and other devices are powerful and strikingly easy changes. Furthermore, in many organisations, the 'power save' features do exist but have not been activated. Energy Star standards also enable us to determine what the impact of various equipments is before we buy it. At the next level, it is to ensure an equipment layout that optimises cooling.

But when considering using environmen-

tally friendly techniques, companies should take the Green effort beyond power saving through the tactical ways.

Today the seed is to transform the data centre footprints through more sustainable strategies, such as consolidation and virtualisation, which offer a more long-term solution to the problem.

VIRTUALISATION BUZZ

Virtualisation reduces the server footprint and therefore improves the energy efficiency of an enterprise.

Implementing server virtualisation can result in significant savings. Estimates by VMware and P&E Co state that direct energy savings for each server removed via server virtualisation run between \$300 and

\$600 per year. In fact, Virtualisation is today becoming a strategy of choice for CIOs across the world. Experts and practitioners agree on the fact that virtualisation of data centres not only improves performance but also increases IT efficiency, cuts power and cooling costs, and makes disaster recovery as easy as pushing a button.

According to Gartner, Virtualisation will be the highest-impact trend changing infrastructure and operations through 2012.

Analysts at Gartner state that the leading edge of this change is server virtualisation, which promises to unlock much of the underutilised capacity of existing server architectures.

According to the research agency's figures, there were about 5,40,000 virtual machines deployed around the world, not including consumer usage. By 2009, this figure is expected to soar to over 4 million.

All these numbers validly represent the growing demand and adoption of virtualisation in enterprises across the globe.

Consolidation is another option. If you are not prepared to launch the virtualisation project, you can consolidate your existing server.

This can be done first by looking at application optimisation and then drilling that down into complete requirement mapping. The next step is analysing the application server maps that are in place and then consolidate servers according to that. These are again long-term programmes that need to be well planned.

THE HOLISTIC APPROACH

The key to handling the complexity of greening a data centre is to take a holistic approach.

An enterprise must look at all the aspects of the environmental impact instead of focusing only on the most obvious ones.

Many a time, a plan on paper may yield consequences way beyond what was originally expected. Therefore, planning and implementing the initiative in a phased manner is the secret to energy-efficient and clean IT.

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