How green is your data centre?

Data reveals that around $140 billion worth of server performance goes unused annually, despite companies paying for the power to run and cool the machines.

By Chris Green in Faro, 26 Sep 2008 at 16:37

Increases in networking performance, power over Ethernet (PoE), and server and switch density are among the key challenges facing companies trying to reduce the carbon footprint of their data centres.

IDC senior research analyst Alberto Bellé revealed some surprising figures on the state of the data centre, along with data on the energy wasted on underused enterprise systems.

“Around $140 billion (£77.7 billion) worth of server peformance is going unused globally on an annual basis,” Bellé told *IT PRO* at the NetEvents conference in Faro.

“Yet despite all this unused capacity, companies are still spending a huge amount of money on powering and cooling these underused servers.”

IDC’s data predicts that there will be 41 million active enterprise servers in use by 2010, and that for every £1 spent on hardware, another 50p will be spent annually powering and cooling that equipment.

“Roughly 50 per cent of the acquisition cost of a server will be spent annually operating it in terms of energy and air conditioning,” said Bellé.

That equates to $29 billion spent annually on direct and indirect energy, along with air conditioning just for data centres worldwide.

The problem is likely to get worse with increases in networking infrastructure, in particular with the move to 40 and 100GB Ethernet, and the increased use of PoE, which continues to create problems for equipment makers that are trying to reduce energy consumption in switches and routers.

Bellé also highlighted that, on average, servers are still running at about 10 per cent of capacity, but that the rapid growth in virtualisation technology will go part of the way towards reducing wasted processor capacity.

“Virtualisation is part of the solution, but it is important to remember that it is not the whole answer. Another part of the solution is cultural change within the IT department, where a shift towards maximising efficiency of IT hardware is essential,” he added.