KEMP Technologies' LoadMaster Products Reduce Datacenter Power Consumption

KEMP Technologies LoadMaster Application Delivery Controllers and Server Load Balancers are low energy consumers. Reducing energy use at the point of consumption, LoadMaster providers benefits to other areas by reducing load on power and cooling facilities, which in turn reduce their own energy use.

KEMP TECHNOLOGIES, INC.

Introduction

Power availability is one of the most important challenges facing datacenters today. Cooling requirements for servers are influencing power demand, while putting pressure on datacenter operational procedures. Most of today's IT operations are not properly built to deal with energy-overloaded IT infrastructure. Energy improvements can be made from both an equipment-planning perspective, and with sound operational practices in place for physical infrastructure such as network devices, power, cooling, monitoring, etc.

IT departments that proactively identify devices that waste energy; enable power saving features and power down underutilized servers, can receive excellent benefits from energy reduction. With energy saving practices is place, a positive impact can be made on the environment, on energy consumption, and ultimately upon a company's bottom line.

Energy costs and consumption

In the past, datacenter power usage had not been considered critical design criteria. In fact, many datacenter managers are unaware of their monthly energy bills. Some of the reasons for this include:

- Electrical bills are typically sent long after the charges are incurred. With no clear link between decisions such as the installation of new datacenter equipment and the increased cost of the electricity.

- Billed electrical costs are often not within the responsibility or budget of the datacenter operating group.

- The electrical bill for the datacenter may be included within a larger electrical bill, and may not be available separately.

- Decision-makers are not given sufficient information during planning and purchasing decisions regarding the energy cost consequences.

KEMP's LoadMaster products reduce datacenter power consumption.

The LoadMaster 1500 is an ultra-low power consumption device, drawing 0.2 AMPs at full load. This number is about 5-10 times less than other similar products. There are a number of benefits to being an ultra-low power consuming device, including significant decrease in the use and expense associated with energy, and much lower cooling requirements, further driving down energy costs and associated waste.

LoadMaster ultra-low energy consumption benefits managed hosting providers

Due to the LoadMaster's very low cost of acquisition, the ratio of "real servers" to LoadMaster devices can be as low as two servers to one LoadMaster in a single configuration, and two LoadMasters to two servers for redundant (high-availability) configurations. This means that in a densely populated datacenter, the number of LoadMaster appliances can be nearly as high as the number of actual real servers being load balanced. In this case, the ultra-low power consumption and very low cooling requirements of the LM1500 can have a significant impact on the total energy use and costs for managed hosting provider datacenters.

Promoting environmental safety

All LoadMaster products adhere to RoHS compliance. RoHS is an EU directive which restricts the use of hazardous materials in the manufacture of various types of electronic and electrical equipment.

Conserving IT resources - resource-based load balancing and SSL Acceleration

Resource-based (Adaptive) load balancing is built into every LoadMaster. This enables customers to consolidate the number of physical servers needed to provide optimum performance levels. In addition, since a single LoadMaster appliance can support up to 256 virtual services (websites, applications, etc.) servers can be further aggregated to provide access to more applications, while keeping the user experience at optimum levels.

LoadMaster also includes built-in SSL offload/acceleration/ using specially optimized ASICs. This can dramatically decrease the amount of physical servers needed to provide encrypted access to applications. Since SSL processing places a large burden on server CPU utilization, offloading and accelerating SSL at the LoadMaster alleviates the servers from having to handle the compute-intensive SSL processing, and can help further consolidate the number of servers needed to provide optimum application performance levels.

Summary

Low energy consumption network devices such as the LoadMaster enable SMBs to lower their energy bills and reduce cooling requirements. Robust optimization features such as resource-based load balancing and SSL acceleration, KEMP enables our customers to deliver optimum application performance using fewer servers. Fewer servers mean less energy being used, and lower operating costs, while promoting a greener environment.