Smart tools for the cloud and rack

DATA CENTER

The server space is changing, bringing new opportunities for the agile admin. If you plan on taking up residence in the new data center, you'd better get your toolkit ready. This month we explore tools and techniques for data center and server room environments. **BY JOE CASAD**

The data center is in a state of continuous re-invention. Today's data centers are huge off-site facilities in which thousands of virtual machines invisibly migrate and execute. But as futuristic as these new facilities might appear, they are really an extension of an ancient equation: efficiency through geographical concentration and economies of scale. Whether you get your cycles from an old-fashioned server room or a new-fangled virtual WalMart, you'll find plenty to think about this month.

We start with some tips on performance tuning for virtual environments. Most administrators have the sense that virtualization exacts some performance cost, but how much is it really costing? And what steps can you take to minimize the efficiency loss? We take a vendor-neutral look at the mysteries of virtual performance.

In the rush to embrace the wonders of the cloud, many organizations uploaded their infrastructures without stopping to consider the additional performance benefits available through more efficient use of cloud services.

Our second article explores some examples describing how to write web apps that take advantage of the subtle differences between cloud services and conventional web environments.

We also examine PelicanHPC, a Linux distro designed for building high-performance clusters, and, for those who still have custody of the hardware, we end with a look at how to map a network with the ingenious Nagios visualization add-on NagVis.

Whether you are a new age or old guard admin, you're sure to learn something new in this month's cover story. ■