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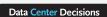
Today's Data Centers: Trends in Power Usage, Virtualization, and More

Today's economy has significantly limited data center spending within many organizations. In this Expert E-Guide, brought to you by SearchDataCenter.com and Dell, you will discover the most prominent trends in today's data centers, including power usage and virtualization implementation. Learn how businesses are reducing their current data center energy consumption and explore the steady rate at which server virtualization spending continues to increase. Gain insight into the downward trends in systems management spending and IT job advancement.

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Table of Contents:

Data center facilities reducing data center power

By Matt Stansberry, Executive Editor

According to the survey, data center power consumption is getting more important. The percentage of folks who said this was a major concern increased from 48% to 55% this year. While these numbers are unsurprising given the downturn in the economy and high energy costs, what is surprising is that the behavior concerning power consumption has begun to change: There was a major increase in the number of respondents whose business unit actually pays the power bill, from 37% to 53%. This is important – it's one of the energy-conscious approaches SearchDataCenter.com has encouraged its readers to adopt for quite some time. "When the power bill gets really significant, it ends up on the CEO's desk," Rosen said "When he sees that the biggest user is IT, IT has to deal with it." Still 28% of survey respondents don't know whether their power bill has increased or decreased – though this is an improvement over the 36% who didn't know last year. For the respondents who are paying attention, a majority see major increases in the power bill for their data centers. 44% have seen an increase, and 19% say the increase is greater than 10%.

Hot-aisle/cold aisle containment - the practice of sealing hot aisles and cold aisles in a data center – gained traction in 2009. Some data centers do hot-aisle and cold-aisle containment themselves, and some buy a system from a provider, such as Wrightline, APC and Liebert. This really wasn't on the radar until late last year, but already 30% of respondents have implemented it, and an additional 15% plan to next year. Data center infrastructure vendors such as APC and Liebert have differing strategies on how this should be done. The cold-aisle containment strategy (encouraged by Liebert) is slightly more popular with respondents than is hot-aisle or plenum containment.

Server virtualization spending continues, but at a sober rate

By Matt Stansberry, Executive Editor

Virtualization budgets shrank only slightly. Last year 56% of respondents planned to increase spending on virtualization, and only 2% planned a decrease. This year 54% still plan to increase spending, but 5% plan to cut server virtualization budgets.

The focus on justifying spending has shifted from the nice-to-have ("Modernizing infrastructure" was the No. 1 reason for increasing virtualization budget last year) to the need-to-have: saving on hardware and power and cooling costs. VMware ESX 3.5 and VMware Server remain the dominant server virtualization platforms. Microsoft Hyper-V and Virtual Server have at least edged out prior versions of VMware, taking the No. 3 and No. 4 spots, with about 5% adoption each. Respondents were asked which hypervisors they planned to implement over the next 12 months, and Microsoft Hyper-V jumped from 13% last year to 22% this year; Citrix Systems' Xen jumped from 7% to 13%.

The number of virtual machines provisioned per physical server stayed the same. Most people say less than 10. And most respondents will not standardize the hardware platforms on which they deploy VMs. But for those that do, blade servers are the preferred form factor.

Systems management spending slumps

By Matt Stansberry, Executive Editor

Systems management spending continues to decline .Thirty-five percent of respondents said they planned to increase spending on systems management software last year – that declined to 27% this year. And respondents planning to decrease systems management spending jumped from 3% to 8%.

Mainframe systems programmer Robert Crawford is not surprised that enterprises are spending less on systems management now. "There are a lot of nifty tools out there, but they tend to be expensive," he said. "Sure, this software can ease pain and boost productivity, but with a bad economy an organization may decide it can live with the difficulties just a little bit longer until things start looking up." On the other hand, if administrators have the time, an organization can build its own systems management tools. "The homegrown stuff may not be as snazzy or comprehensive as a store-bought tool, but it would do for now," Crawford said. The main reasons respondents have turned to systems management is to improve employee productivity, introduce automation, contain costs and fill staffing gaps. People are far more price-sensitive about systems management software. Nearly half (47%) said it was a major purchasing criteria last year, compared with 57% this year.

Interest in the IT Infrastructure Library (ITIL) seems to have waned : The number of shops saying they've implemented ITIL shrunk year over year since 2007. Only 21% of the audience has implemented ITIL (a decline from 30% last year).Of those that have deployed it, half have implemented the latest version: ITIL v3. And far fewer respondents use ITIL as a purchasing criterion for software: 70% did last year, compared with only 58% this year. The adoption of configuration management databases (CMDBs) software rose – from 55% to 64% HP, BMC, IBM lead the pack of CMDB vendors. And several respondents named Microsoft as their CMDB vendor, although the company doesn't have a CMDB product.

IT job advancement situation grim

By Matt Stansberry, Executive Editor

Nearly half of respondents (49%) don't expect a raise or bonus this year, compared with 23% last year. Technical certifications continue to lose merit with respondents: 55% don't have any certification, versus 46% last year. The number of respondents who say certification doesn't matter in their raise or bonus structure increased from 77% last year to practically 90%.

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