

State of the Data Center  
Regional Data – Global  
*Second Annual Report - 2008*

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## EXECUTIVE OVERVIEW

The findings of our second annual State of the Data Center report indicate the data center is at a crossroads. Continuing the trends we saw in 2007, companies are asking IT to make do with fewer resources. Staffing problems remain a big issue for companies in 2008.

Yet the IT manager's "to do" list is as long as ever. Applications continue to grow in number and complexity. Servers remain underutilized. Storage continues to grow but is also underutilized. And disaster recovery plans – more important than ever – are still not fully complete.

So it is not surprising that in our second annual State of the Data Center Report we find the data center a very busy place. IT is pursuing dozens of initiatives – from server virtualization to Storage as a Service – with one goal in mind.

Do more with less.

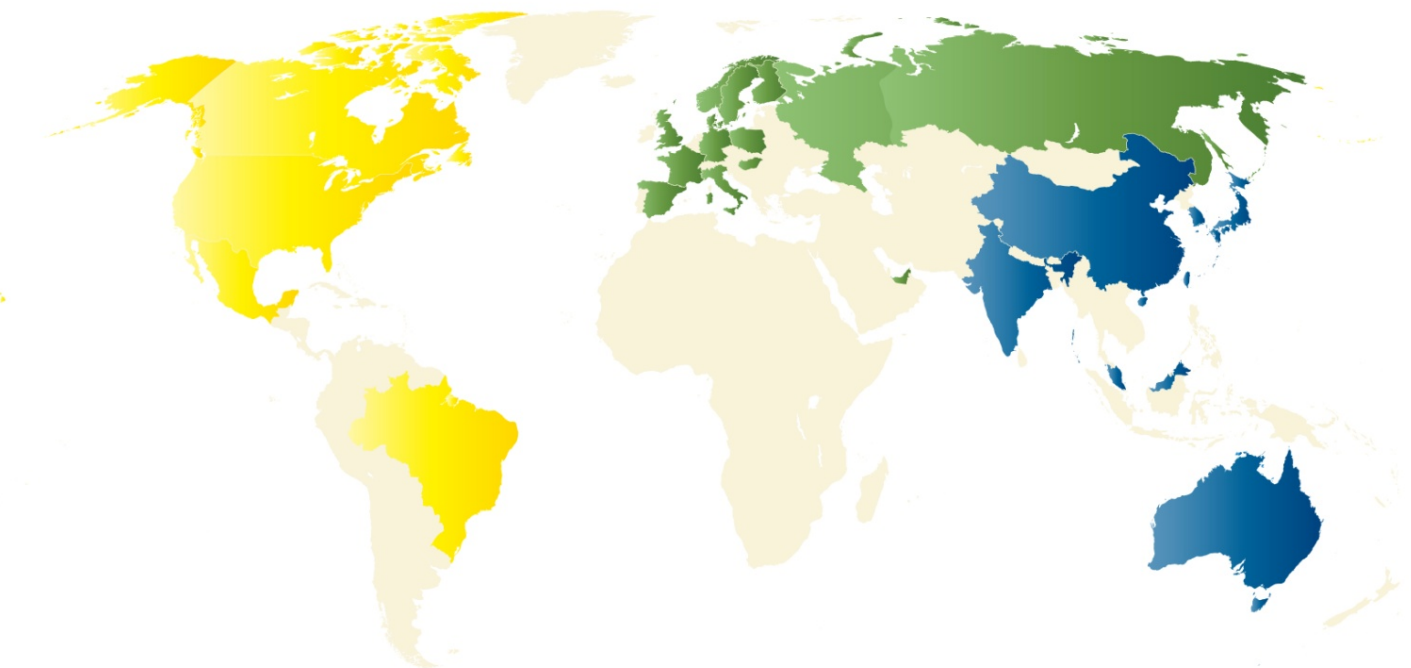
## METHODOLOGY

Symantec surveyed 1,600 companies worldwide to compile the second annual State of the Data Center report. Applied Research was selected to perform the survey, and targeted the following data center personnel:

- Enterprise (5,000 or more employees)
- Managers, directors or VP/SVP
- Worldwide scope (21 countries, see map below)

Applied Research fielded the survey by telephone the last two weeks of September and the first week of October.

This study has a margin-of-error of approximately 2.4 percent at a 95 percent confidence level.



<b>Americas (644)</b>	
United States	513
Canada	49
Brazil	49
Mexico	33

<b>EMEA/Eastern Europe (536)</b>	
Germany	123
UK	101
France	95
Italy	78
Spain	50
Russia	45
Nordics	14
Hungary	10
Poland	10
UAE	10

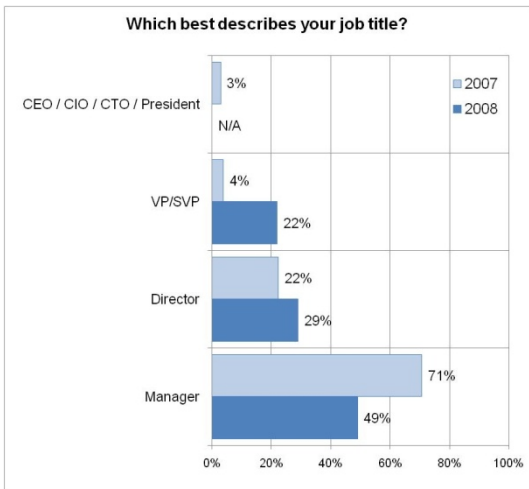
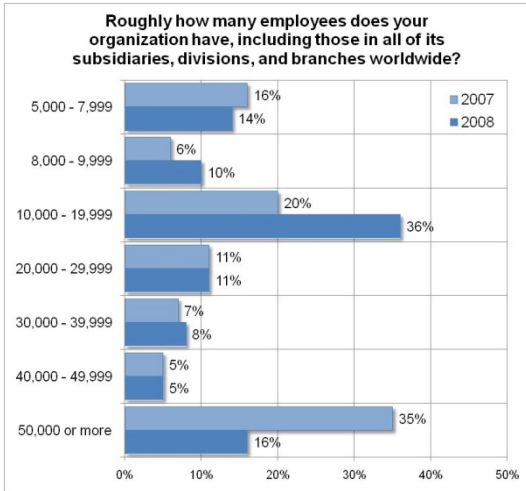
<b>Asia Pacific (414)</b>	
Japan	163
China	122
India	44
South Korea	35
Australia	30
Singapore	10
Malaysia	10

## DEMOGRAPHICS

Symantec spoke with data center staff in 1600 companies worldwide. The companies ranged in size from 5,000 to more than 50,000 employees, with the median company having between 10,000 and 19,999 employees.

Roughly half were managers. The rest were directors or VP/SVPs. Three quarters recommend IT products or services.

The median company reported having 500 people working in IT, 30 to 49 data centers, and about 20 percent of their IT staff dedicated to data center responsibilities.



## FINDING 1: DOING MORE WITH LESS

In many ways, the phrase “doing more with less” could be part of IT’s job description. Data center managers reported both an increase in what they need to accomplish as well as a strong drive to reduce costs. The net result was a flurry of initiatives in the data center targeted at increasing IT efficiency.

### Doing More

Seventy-five percent of the companies surveyed say user expectations were rising gradually or rapidly. Just 2 percent saw user expectations falling. Furthermore, 56 percent of the respondents saw meeting the service levels demanded by the organization to be getting more or much more difficult to meet. Only 13 percent saw service levels to be easier to meet.

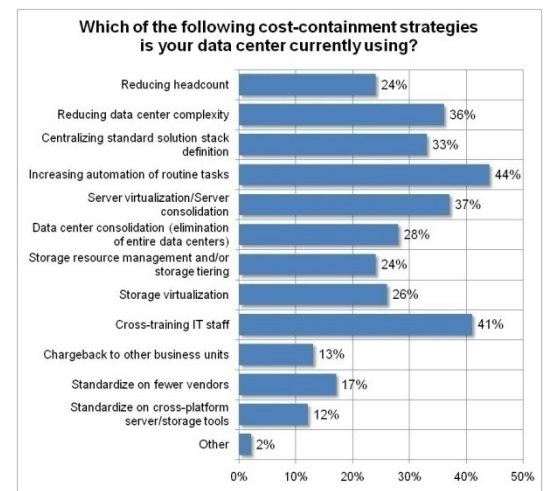
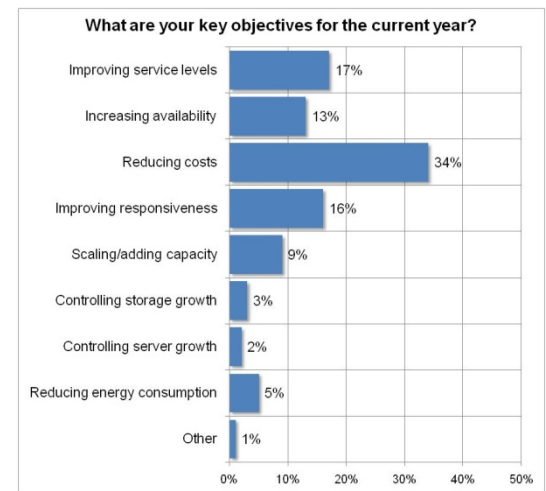
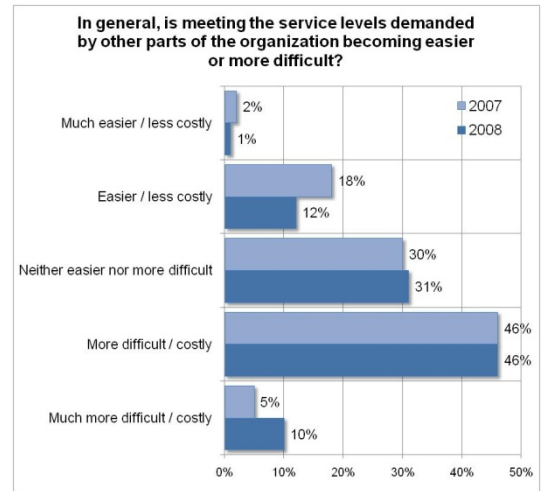
### With less

We asked companies to identify their key objectives for the year. Reducing costs was by far the most frequently mentioned objective. In fact, reducing costs was mentioned by more companies than the next two objectives *combined* (improving service levels and improving responsiveness).

### Drives initiatives

The initiatives mentioned most often to fight costs were:

1. Increasing automation of routine tasks
2. Cross-training IT staff
3. Server virtualization/Server consolidation



## FINDING 2: STAFFING A BIG ISSUE

Staffing remains a big issue for the companies in 2008. For example, 37 percent reported being understaffed while only 7 percent reported being overstaffed. Furthermore, 48 percent say finding qualified applicants is a big or huge problem.

Having distributed data centers exacerbates the issue. Seven in 10 of the companies believe that each data center location needs its own highly-skilled staff.

This year's study shows that companies are relying on two specific initiatives to alleviate staffing woes: Outsourcing and training.

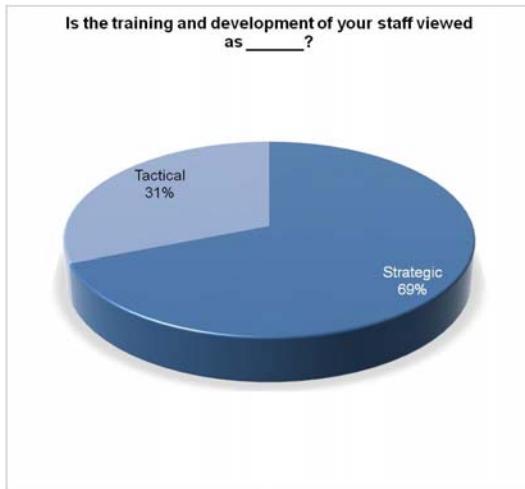
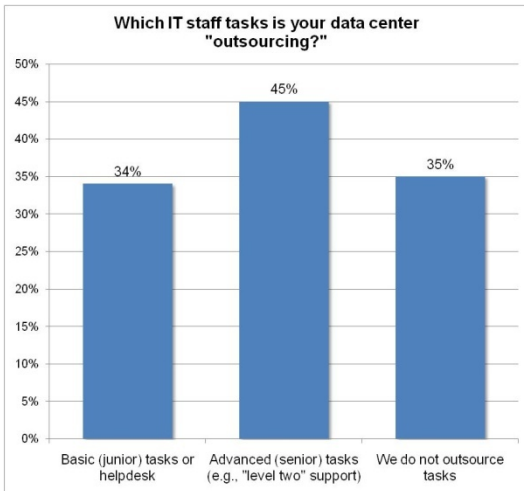
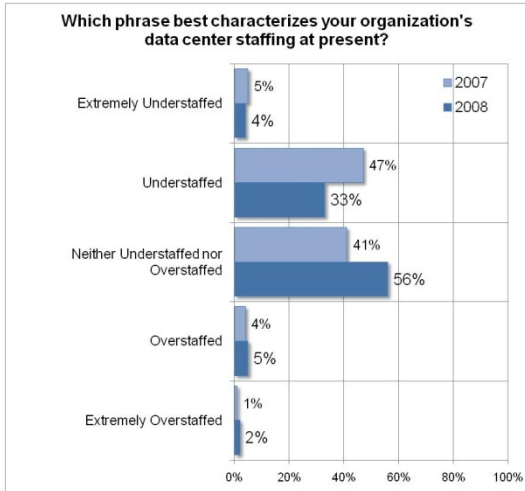
### Outsourcing

More than half the companies (65 percent) outsource some tasks. The primary driver for outsourcing is to give staff time to focus on other tasks (37 percent). Cost was a smaller incentive, mentioned by just 23 percent.

Outsourcing does not seem to have caused problems in the organization. Half are neither more nor less satisfied, with the rest fairly evenly split between being more satisfied versus less satisfied, with a slight skew towards being more satisfied.

### Training

Training staff is an important job for IT. Two thirds view training as a strategic (versus tactical) activity, and 80 percent expect training budgets to rise or stay constant in the next two years.



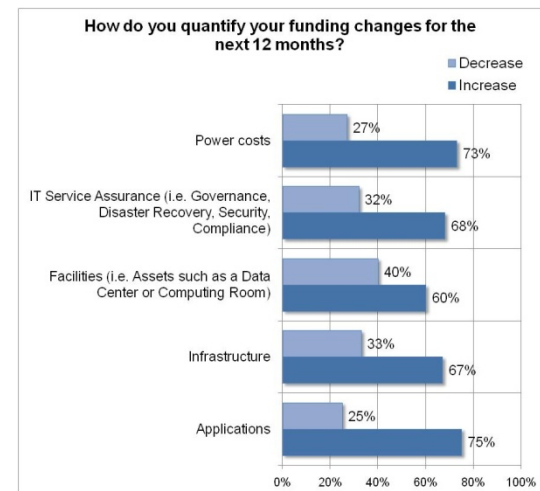
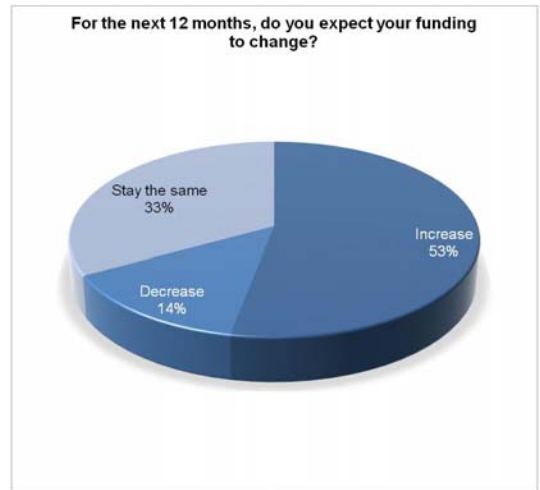
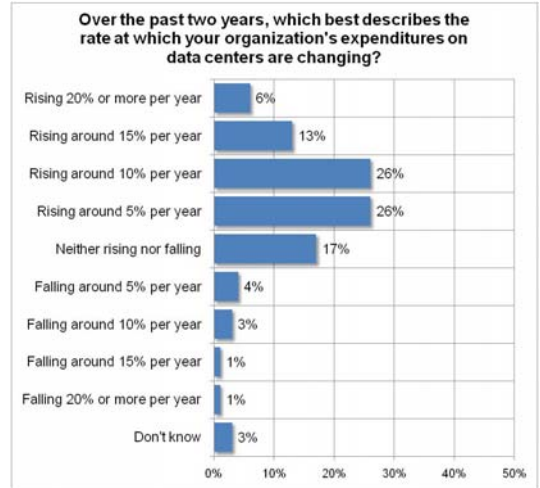
### FINDING 3: BUDGET STILL RISING

The survey was fielded at precisely the same time that the media was reporting on the meltdown of the financial segment. Applied Research contacted half the companies before and half after the crisis hit. While we believe the financial downturn will negatively impact IT budgets, companies did not report this as of late September, early October.

Looking back, seven in 10 said IT budgets had risen in the past two years, with almost half (45 percent) seeing annual increases of 10 percent or more. The biggest components were power and applications – with 79 percent reporting increases in each. Infrastructure and IT service assurance followed closely.

Surprisingly, half see increases coming over the next year, with only 14 percent seeing decreases. One would suspect that this finding will change as companies begin to feel the full effect of the financial crisis.

But, for now, companies expect budget increases in applications (75 percent), power (73 percent), and IT service assurance (68 percent).

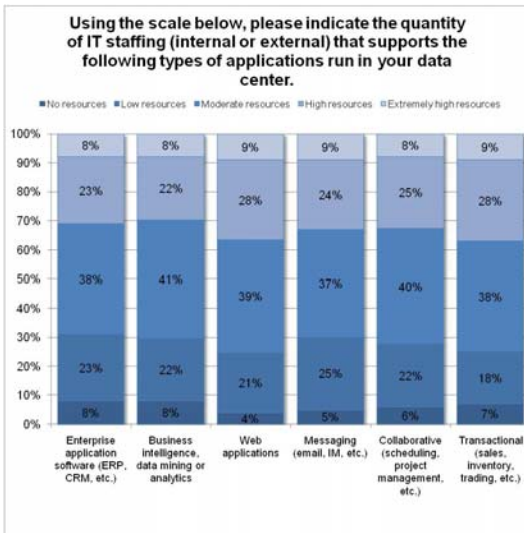
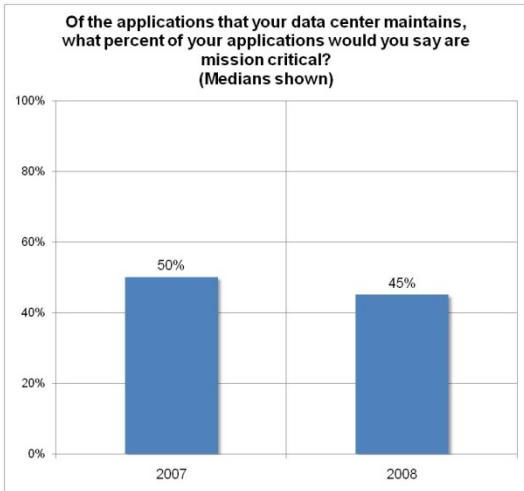
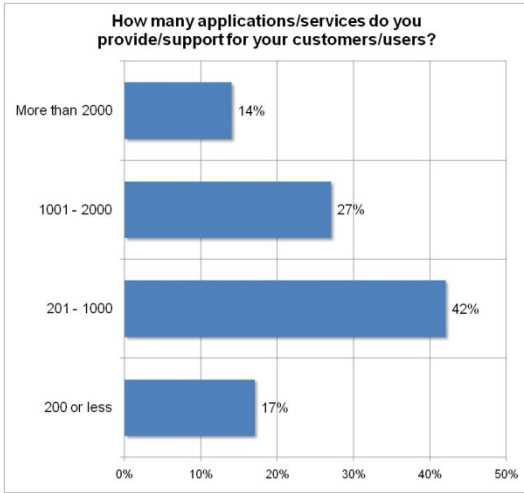


## FINDING 4: APPS CONTINUE TO GROW

Companies have a *lot* of applications. In fact, 41 percent report having more than 1,000 applications. Just less than half will add 11 or more applications, while 57 percent will refresh 11 or more applications. Just 37 percent will decommission 11 or more applications.

Data center managers report that just under half of these applications are deemed mission critical.

When asked which types of applications require the most IT resources, companies pointed to Web applications (37 percent), transaction (37 percent) messaging (33 percent), and collaboration (33 percent).



## FINDING 5: SERVER INITIATIVES

Continuing the trend from 2007, servers remain underutilized. In fact, companies in 2008 reported 60 percent server utilization down from 70 percent in 2007. Compounding this problem is the difficulty data center staff has managing servers. Half the companies found troubleshooting downtime somewhat to very difficult, followed by insuring high availability across multiple tiers and rich application monitoring and awareness.

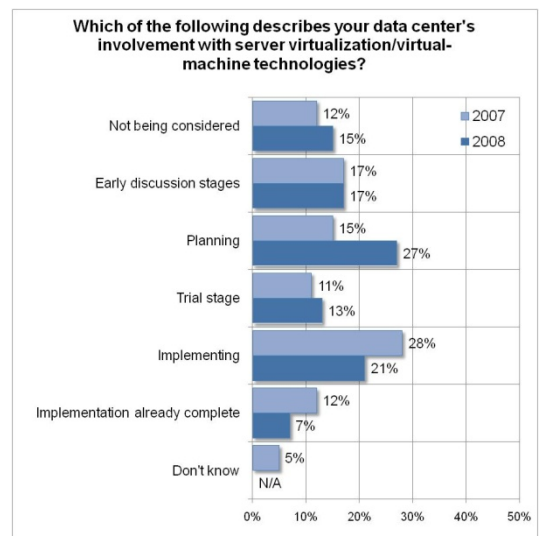
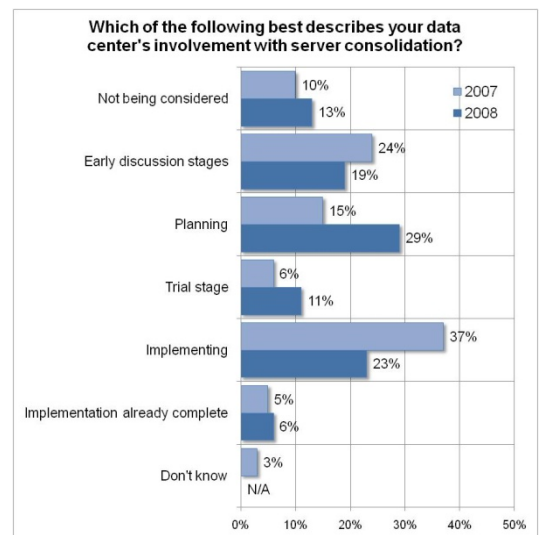
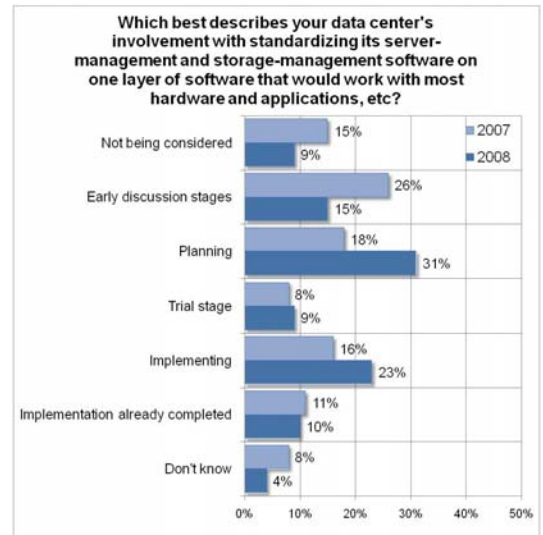
As one would expect, companies are scrambling to find ways to address these issues.

Nearly all (88 percent) are pursuing a strategy of standardizing server and storage management on one layer of software that will work across most application and hardware platforms. This is an early stage initiative, with 46 percent discussing/planning and 42 percent in trials or implementing.

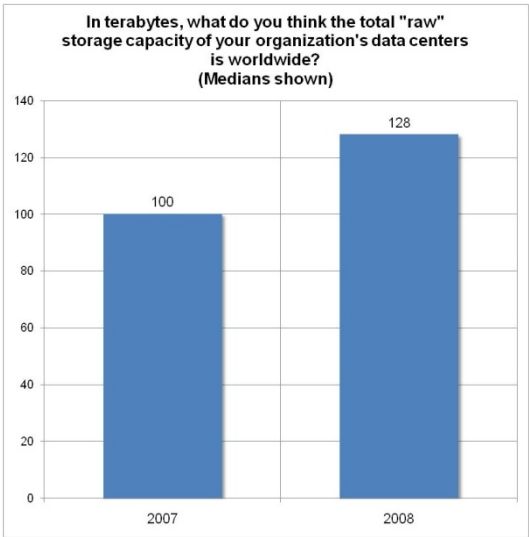
Almost nine of 10 (87 percent) are pursuing server consolidation, with about half in discussion/planning stages and 40 percent in trials or implementing.

The situation is nearly identical with server virtualization. Interestingly, when we asked those who were not virtualizing why, 42 percent complained existing solutions were too new or immature. This is a significant increase from 2007, where just 31 percent reported this issue. It appears that as companies have gained experience with virtualization they have run into difficulties. In fact, 39 percent report that virtual servers have management issues, up from only 18 percent in 2007.

We saw a surge in Windows servers in 2008 at the expense of UNIX. Linux is holding steady for now.



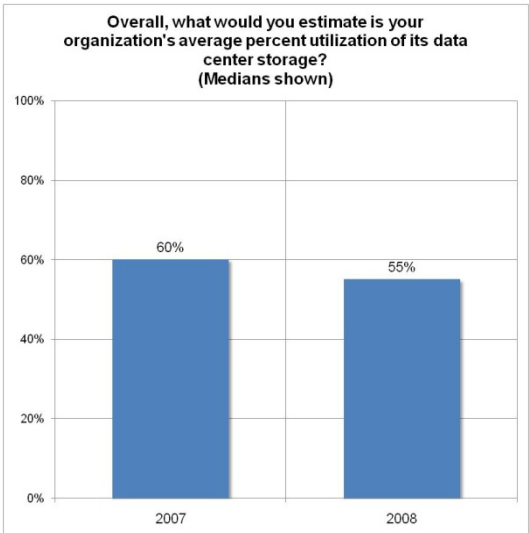
## FINDING 6: STORAGE INITIATIVES



We found the situation with storage to parallel that of servers. While storage capacity continues to grow, it remains underutilized, and drives a wide range of initiatives.

In 2008, companies reported a median of 128 terabytes of raw storage within the organization (up from 100 in 2007).

The applications most driving storage growth were business intelligence, enterprise applications and Web applications. Note that Web applications are up from 2007 (34 percent report Web applications as increasing storage needs in 2008 up from 18 percent in 2007).

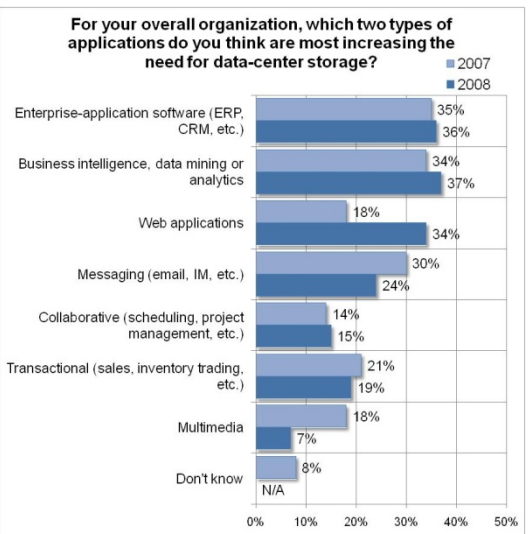


Four of five are exploring storage virtualization, with half in discussing/planning versus 31 percent trialing or implementing. File-based virtualization is at 63 percent, up from 45 percent in 2007.

Storage resource management has 46 percent discussing/planning stages and 32 percent in trials or implementing.

As far as data protection, 79 percent are pursuing continuous data protection, with about half in discussion/planning stages and 31 percent in trials or implementing.

We found 77 percent of companies are working on data deduplication, with 44 percent discussing/planning and 33 percent trialing or implementing. Interestingly, this is mostly happening at the data center, with only 43 percent implementing data deduplication in remote offices.



Seven of 10 are pursuing replication, with 43 percent discussing/planning and 36 percent in trials or implementing.

And, finally, roughly three fourths are exploring Storage as a Service, with 42 percent discussing/planning and 30 percent in trials or implementing.

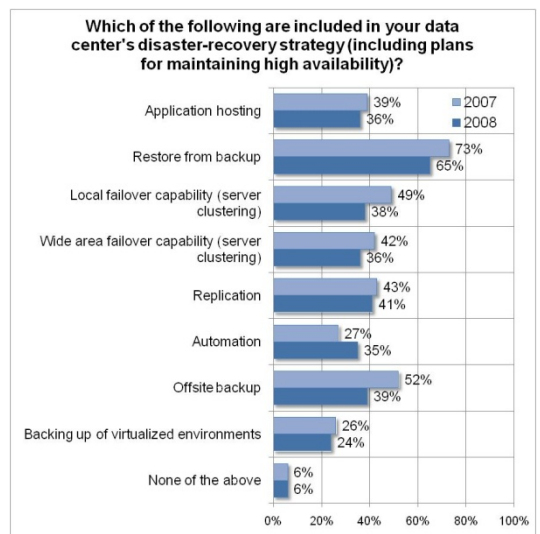
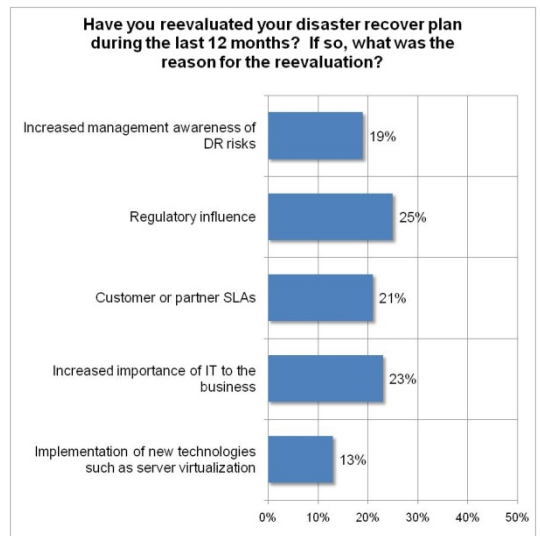
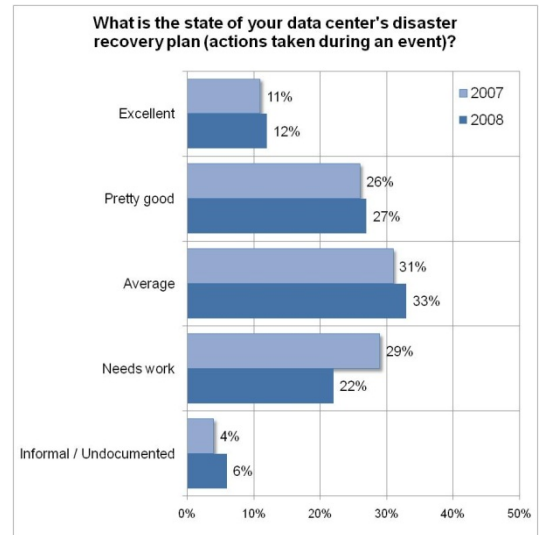
## FINDING 7: DISASTER RECOVERY

Again echoing our findings from 2007, companies report room for improvement in the area of disaster recovery. In fact, just 33 percent report their DR plan is average, while 22 percent say it needs work and 6 percent report their DR plan is informal or undocumented.

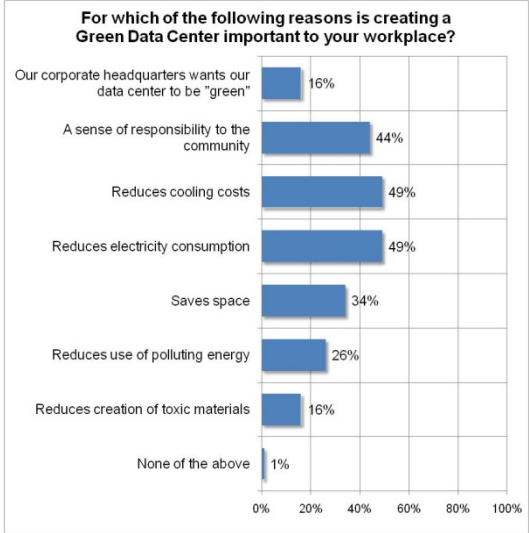
Of those reevaluating their plan, regulatory influence is the biggest driver, followed by increased importance of IT to the business and customer or partner service level agreements.

Companies still find that human error is the biggest cause of unplanned downtime, being the culprit 24 percent of the time. Hardware/software failure and power outages follow closely behind.

The top data center DR plan component remains restoring from backup, with 65 percent of the companies mentioning, followed by replication (41 percent) and offsite backup (39 percent).



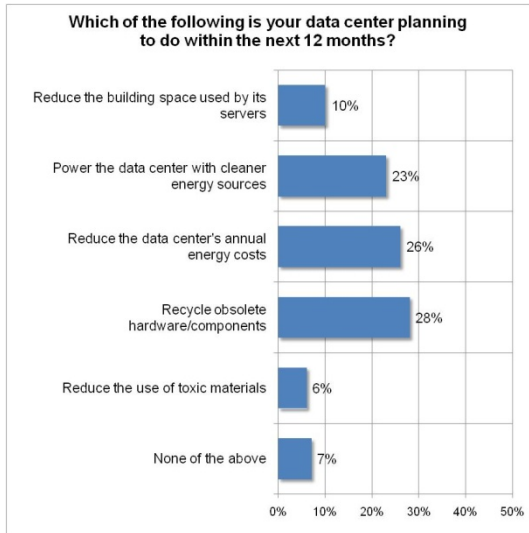
## FINDING 8: GREEN DATA CENTER



Continuing the trend we spotted in 2007, the data center's focus "being green" was driven primarily by cost issues in 2008. That said social responsibility is on the rise as a driver.

We asked companies why creating a Green Data Center was important to their workplace. Reducing electricity consumption and reducing cooling costs were each mentioned by 49 percent, followed by a sense of responsibility to the community (44 percent) and saving space (34 percent).

We then asked what they specifically planned to do within the next 12 months. Recycling obsolete hardware and components topped the list at 28 percent, followed by reducing annual energy costs (26 percent) and powering the data center with cleaner energy sources (23 percent).



Symantec plans to follow-up with a much more detailed study of the Green Data Center in the first half of 2009.