



## **Survey Results and Analysis for AFCOM's 2009/2010 Data Center Trend's Survey**

***AFCOM'S 2009/2010 Data Center Trends Survey*** examines where data centers stand today in the seven areas most critical to their growth and success: Greening, Data Center Consolidation, Data Center Technology, Mainframe Computing, Data Center Growth/Expansion, Storage, and Cyber Terrorism. The results, from over 400 of the largest data centers in the world, allow us to project how the latest trends in each of these areas, including hardware, software, technology, power, cooling, and management techniques will impact the industry over the next five years.

## **GENERAL**

My primary responsibility is in:

Facilities	24.50%
IT	52.90%
Other	22.60%

I am employed by:

College or University	7.40%
Government Agency	8.10%
Private Industry	84.50%

My overall 2009 data center budget (\$US) is:

Under \$1 Million	32.70%
\$1-\$3 Million	25.40%
\$3-\$5 Million	12.60%
\$5-\$10 Million	9.90%
Over \$10 Million	19.40%

## **GREENING**

Do you have a formal Greening initiative?

Yes	42.20%
No	57.80%

Are you actively engaged in Greening?

Yes	71.30%
No	28.70%

If you have implemented Greening, which of the following results have you experienced?

Cost Savings	47.90%
Power Savings/Efficiencies	60.80%
Cooling Savings/Efficiencies	51.40%
Water Conservation	11.50%
Other	6.20%

What have been the major obstacles to your Greening efforts? The following are in terms of importance with (1) being most important and (5) being least important:

Procrastination	
1	7.30%
2	7.50%
3	17.90%
4	13.20%

5	24.40%
NA	29.70%
Commitment from corporate management	
1	14.80%
2	22.70%
3	17.90%
4	17.90%
5	13.20%
NA	13.50%
Lack of a clear definition of just what “Greening” is	
1	16.00%
2	16.00%
3	20.40%
4	17.60%
5	10.20%
NA	19.80%
Not enough current staff to support official Greening effort	
1	11.70%
2	21.00%
3	21.30%
4	16.60%
5	11.70%
NA	17.70%
Not enough money in budget to purchase more efficient servers, HVAC, etc.	
1	39.50%
2	16.20%
3	14.40%
4	9.00%
5	7.20%
NA	13.70%

## **CONSOLIDATION**

During the last three years have you considered or actually been in the process of consolidating facilities?

Yes	62.10%
No	37.90%

Do your future consolidation plans involve relocating or building a new facility?

Yes	52.10%
No	47.90%

In considering the location of a new facility, how do you rate each of the following in terms of importance?

Availability of Power	
Very Important	67.80%
Moderately Important	18.10%
Least Important	14.10%
Susceptibility to Local Natural Disasters	
Very Important	46.60%
Moderately Important	30.60%
Least Important	22.80%
Proximity to Other Company's	
Very Important	30.30%
Moderately Important	32.50%
Least Important	37.20%
Availability of Water	
Very Important	20.50%
Moderately Important	41.50%
Least Important	38.00%
Available Work Force	
Very Important	17.10%
Moderately Important	36.80%
Least Important	46.10%

**DATA CENTER TECHNOLOGY**

Which of the following technologies have you currently implemented?

Cloud Computing	14.90%
Cluster Computing	50.00%
Virtual Processing	72.90%
Web Applications	70.40%
Automation	54.80%

Which of the following technologies have you considered but NOT implemented?

Cloud Computing	46.30%
Cluster Computing	11.70%
Virtual Processing	9.60%
Web Applications	4.80%
Automation	15.40%

Do you regularly monitor the operational efficiency/effectiveness of any of the following?

Server Utilization	61.70%
Storage Capacity	64.40%
Power Consumption	68.10%

Network Traffic	65.80%
Web Security	54.10%
Other	4.80%

How do you monitor these?

Manually	45.60%
Software Monitoring Tools	81.90%
Hardware Monitoring Devices	55.00%

On which of the following do you have regular, periodical testing and maintenance performed?

Mainframes and Associated I/O Devices	28.00%
Servers	50.20%
Storage Devices	43.60%
UPS Systems	85.60%
Backup Generators	78.00%
EPO Buttons	18.80%
Water Detectors (under raised flooring)	42.90%
Fire Suppressant Systems	72.50%
Other	5.50%

Which of the following do you NOT have in your data center?

Mainframes and Associated I/O Devices	43.60%
Servers	1.60%
Storage Devices	1.60%
UPS Systems	2.80%
Backup Generators	12.60%
EPO Buttons	15.10%
Water Detectors (under raised flooring)	13.10%
Fire Suppressant Systems	4.10%

Do you have a complete and updated "Data Center Policies and Procedures Manual"?

Yes	39.80%
No	60.20%

Do you, or your company, perform background security checks on all potential new employees?

Yes	82.40%
No	17.60%

## **MAINFRAME COMPUTING**

Are you currently using one of more mainframe computers in your data center?

Yes	39.60%
No	60.40%

How many mainframe computers do you currently have installed?

0-19	98.20%
20-39	0.60%
40-59	0.60%
60-79	0.00%
80-99	0.00%
100-119	0.60%

Over the next two years are you considering the replacement of any existing mainframes?

Yes	45.70%
No	54.30%

The replacement of any existing mainframes will be with?

Servers or other alternative processors	46.40%
Mainframe(s)	53.60%

If you do not currently have any mainframes, have you had any in your data center in the last:

Five Years?	
Yes	27.20%
No	72.80%
Ten Years?	
Yes	38.20%
No	61.80%

## **DATA CENTER GROWTH/EXPANSION**

Do you think you will require additional data center space within the next five years?

Yes	60.30%
No	39.70%

Which of the following solutions for additional space are you considering?

Data Center Relocation	30.00%
Physical Improvements/Additions to Existing Facility	36.20%
Adding Pods/Data Centers in a Box	11.20%
Utilizing Co-Location Centers	22.00%
Managed Hosting	13.80%
Other	4.40%

## **STORAGE**

Over the past five years the data storage requirements at my data center have:

Increased Dramatically	63.10%
Increased Moderately	27.00%
Increased Slightly	7.90%
Decreased	2.00%

If your storage requirements have increased, this is attributed mostly to:

Government Regulations	8.30%
Corporate Growth	77.60%
Other	14.10%

If your storage requirements have increased, which of the following technologies have you implemented to deal with that growth?

RAID	41.30%
SAN	77.10%
NAS	41.70%
Other	2.50%

## **CYBER TERRORISM**

Has your data center officially recognized cyber terrorism as a threat that needs to be dealt with?

Yes	60.90%
No	39.10%

Have you received any training or other in-depth information concerning cyber terrorism through your company?

Yes	25.80%
No	74.20%

Have you added cyber terrorism prevention/recovery procedures to:

Your Disaster/Recovery Plan	34.40%
Your Data Center Policies and Procedures Manual	24.80%
Employee Training Classes	19.70%