

# Trip Report

The 2008 Gartner Data Center Conference was held December 2-5 at the Las Vegas MGM Grand. Marking its 27th anniversary, the conference drew more than 1600 data center executives from a cross section of organizations and industries. This report provides highlights from the 4-day event.

## Key Takeaways

How do you manage – in some cases build – data centers that are easily manipulated, cost- and energy-efficient and ready for growth? Especially now, when every 12 to 18 months there's something new to react to, in terms of technology, trends and business conditions. Infrastructure demands, an economy in turmoil, technologies for virtualization and automation, and the emergence of cloud computing are all happening too rapidly to simply stay in react mode.

Good sound analysis and the very latest research are what data center execs need for solid decision making in the months ahead. And that's what they found at the 2008 Gartner Data Center conference. Attendees examined technologies and concepts related to:

- Virtualization
- Infrastructure and operations management
- Storage solutions
- Energy efficiency
- Server architectures
- Business continuity management and disaster recovery
- Green IT
- Facilities' management

In short, everything needed to build a future in which the Data Center can quickly provide the right level of services to users, based on individual needs without running out of space and power.

### Key takeaways attendees garnered from four days of strategic analysis and tactical insights:

- **The future of infrastructure looks like a cloud.** Even though cloud computing has a long way to go, it's evolving quickly. By 2012, at least 14% of the infrastructure and operations architecture of the Fortune 1000 will be managed and delivered much like a cloud-computing provider. Corporate data centers will operate as private clouds – flexible computing networks modeled after public providers such as Google and Amazon.
- **Consider virtualization as a catalyst for modernization.** And be sure to look beyond its capacity for simple consolidation and costs savings. Virtualization has the potential to drive many fundamental changes in architectures, process and cultures. Its time as a strategic change agent has arrived.
- **Traditional outsourcing and hosting may not be dead yet, but they're on the way.** Economies of scale are replacing skills, and speed is replacing static contracts. Sourcing will become dynamic and granular. Larger enterprises will form business- and IT-savvy teams to make day-to-day decisions on sourcing.
- **Storage will continue to be a major cost center** as long as data keeps multiplying across the vertical boards at a 60% to 70% rate each year.
- **Energy consumption will be the most dominant trend in data centers over the next 5 years.** Spurred on by potential regulatory involvement, IT and facilities managers will be required to show continuous improvements in how data center resources are utilized.
- **TCO is a driving force behind IT infrastructure and consolidation.** But the emphasis on TCO as a factor is giving way to the need for better services, improved agility, power and cooling and the modernization of applications and systems.
- **Data Centers will become more flexible by building-in a modular approach,** one that separates data centers into self-contained pods or zones, each with their own power feeds and cooling.
- **Storage spending is growing almost three times faster than the IT budget as a whole.** Through 2011, storage spending will increase more than 7% a year, compared with annual IT budget growth of only 2.5%.
- **Server virtualization,** one of the key technologies driving costs down in data centers, is suitable for about 70% of workloads.
- **Data centers waste electricity to the tune of one million kilowatt hours annually.** This could be avoided by implementing Green IT best practices – from improving under floor airflow to exploiting “free cooling.”

## Conference Highlights

- Attendees chose from more than 60 conference sessions presented across seven tracks.
- More than 400 one-on-one sessions with Gartner analysts were held.
- 20 Analyst/user roundtables – designed for a singular focus and limited to 15 participants – addressed today's hot data center issues such as Real-Time Infrastructure, SLAs, Green Storage Technologies, Cloud Computing and gave attendees a chance to hear what their peers were doing in these areas.
- Reporters and bloggers provided full conference coverage from a range of media outlets that included eWeek, NetworkWorld, InfoWorld, Datamation, ComputerWorld, Computer Weekly and others.
- Four Town Hall Meetings served as a forum for your concerns on IT Operations, Data Center Facilities, Server Virtualization and Storage. Lively and entertaining, these give-and-take sessions generated compelling questions from highly engaged audiences addressed by a panel of Gartner analysts covering those areas of research.

### “Google-izing” Your Own Data Center? The Future of Infrastructure and Operations: The Engine of Cloud Computing

In the opening keynote, Gartner's Thomas Bittman discussed cloud computing, an external implementation of a real-time infrastructure (RTI). RTIs are distinguishable by their capabilities around automation, service-orientations, dynamic provisioning, SLAs, etc. Although it will take years for private clouds to develop, some early adopters are already “Google-izing” their own data centers. The enabler is virtualization. Bittman advised the audience that

- Virtualization should be viewed in three distinct versions. Virtualization 1.0 deals with consolidation and costs savings. 2.0 is all about agility and speed. 3.0 is concerned with alternate sourcing or clouding computing
- Cloud computing will accelerate infrastructure and operations modernization.
- The time to build a strategic plan is now. Infrastructure strategic planning is not an option; it's a requirement to navigate change and survive.

### The Data Center Scenario: Planning for the Future

Few IT managers have the opportunity to start a data center from scratch, using a well-researched strategy with detailed architecture. In the real world, you get what you inherit. But that doesn't mean a documented data center strategy and architecture are impossible to achieve. Gartner analysts Donna Scott and Paul McGuckin laid the foundation for strategy development with a range of best practices that balance risk, cost, quality and agility.

### Top 10 Disruptive Technologies Affecting the Data Center

In his popular annual technology review, Gartner analyst Carl Claunch shared the top ten disruptive technologies that are bound to change IT's direction in the short- and long-term.

Up for discussion: Which technologies will have the biggest impact on the way people use technology? How will behaviors change? And what actions should companies take to mitigate and maximize innovation opportunities. Get ready for these ten disruptors, some of which you may already be dealing with:

1. Virtualization in storage
2. Cloud computing
3. Servers: Beyond Blades
4. Virtualization for PCs
5. Enterprise Mashups
6. Specialized systems
7. Social software and social networking
8. Unified communications
9. Zones and pods
10. Green IT

### The Future of the Data Center: Making the Green Data Center a Reality

The future of the data center is much more than the latest technology and the greenest aspirations. In this mastermind interview, moderated by Gartner Analyst Paul McGuckin and joined by panelists, Mark Bramfitt (Pacific Gas & Electric) and Mark Thiel (VMWare) the group discussed how to move closer to a green data center by examining the people, process and political dimensions.

#### Snapshot of Attendees

##### Who participated in the 2008 conference?

**44%** represented companies with more than 20,000 employees

**22%** were employed in the public sector/government

**35%** were at the Director level or higher

## What People Asked About

***We've already started down the path of virtualization and no longer consider ourselves inexperienced. But what should we expect next?***

As you continue to embrace virtualization in your data center, keep some of these guiding principles in mind. Virtualization is having a huge impact on infrastructure architectures, processes and operations, people and skills, and the business. Over the next few years it will be one of the biggest trends to hit infrastructure and operations – changing how you manage, what you buy, how you deploy, plan and charge. It will also shake up the industry, in terms of licensing, pricing and component management. But ultimately, virtualization is just an enabler for very important trends like Real-Time Infrastructure (RTI). Consider the following recommendations, offered at our session on The Great Virtualization Dilemma of the Next Decade:

Today: Virtualization in scale-out (x86) and scale-up (SMP) architectures are a reality – know how to optimize both.

Tomorrow: Be prepared to roll out next-generation planning tools that leapfrog current limitations of planning and server optimization.

Long-term: Get familiar with the IT Resource Planning (ITRP) analytics landscape and know the vendors.

***Our plans to build a new data center are on hold. How can we “make do” with what we have now?***

If you want to make your current Data Center last longer, then consider implementing some of the following tactics to improve your use of power, cooling and space:

- Start measuring data center energy efficiency.
- Eliminate any remaining barriers to enthusiastic teamwork between IT and facilities.
- Reduce load requirements through virtualization and consolidation and by powering down unused servers.
- Dramatically improve cooling efficiency with the use of hot and cold aisles, containment, and other best practices.
- Replace older servers, storage, networking gear and cooling equipment with newer, more energy-efficient products.
- Build out only what you need at the appropriate redundancy level.

## New and Noteworthy

The 2008 conference introduced a brand-new track on the 21st- Century Data Center and its challenges in delivering quality services to users while dealing with cost, technology, environmental, people and location issues. In six, well-attended sessions Gartner analysts provided insight into power and cooling solutions, strategies for greening the data center and, of course, facilities considerations. Sessions included:

- Green IT: What's in it for Me?
- Energy Efficient, Low-Cost, High-Performance Data Centers: Emerging Reality or Just a Dream?
- Taming the Data Center Energy Beast
- Build, Lease or Outsource: How Will You Acquire Your Future Data Center Space?
- Benchmarking the Environmental Impact: How Green is Your IT?
- Best Practices for Data Center Location

## Here's what attendees had to say about this year's conference

- It's a necessary guide to define strategies in my company
- Great opportunity to learn industry directions, best practices, and meet peers from other companies
- Very helpful in providing insight into virtualization
- An excellent immersion in really dealing with the T of IT
- Excellent exchange of information & networking
- Excellent source of knowledge to help me make decisions
- Helped me a lot-very knowledgeable analysts with great presentation skills
- Very practical and hands on
- As a first time attendee, I was impressed
- Right on the money
- Extremely enlightening
- Good relevant content
- Very well organized. Gartner 'people' are accessible & helpful. Great vendor selection
- Great conference to get all of your data center info
- Well worth the time and expense to attend
- The place for strategic and tactical advice
- Excellent content in track sessions
- Very useful to come up to speed on the current hot topics and how they are being addressed
- Presentation of solutions that have traction. Statistics that can be used in presentations to build a case
- It gives me a good overview of the IT industry and best practices
- Very informative
- Very good source of information on current problems and good references to possible solutions & providers
- It is very stimulating. There is very good insight from the Gartner presenters
- Excellent. Get my head above water and reflect on where am and where I should be going
- Very intense-covering broad array of topics
- Good broad coverage of the Data center and IT industries run by non vendor to provide best advice and a forum for networking with industry peers and other industries for BKMs
- Content rich and strategic
- Great way to see how others are managing their data centers
- Opportunity to verify the direction we need to take in our centers
- State of the art, up to date knowledge
- Provides a look outside of the box and into the future. It helps confirm your direction with technology
- This was my 1st Gartner conference. It was like drinking from a firehose
- Best use of my time and worth the trip
- Content was spot-on. Wealth of information
- As much quality information as you could pack into 3.5 days
- World-Class
- Strategic, real-world, valuable
- Great resource to tap into industry trends & hear expert opinions & get long term insight
- Broad view of industry-not vendor specific consistently good presenters
- Gartner vendor agnostic research; summary of coming trends; best practices from early adapters

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## Gartner Interactive Polling: What was revealed?

Throughout the conference, electronic polling was used at key sessions to survey attendees on a variety of topics. Here's a sampling of results:

**Funding for 2009: 31%** of attendees polled said that their virtualization and consolidation projects will receive the lion's share of funding this year.

**Server consolidation: 58%** have a server consolidation project underway, and **26%** have already completed a consolidation project.

**Number of Data Centers: 42%** of respondents operate 3 or more data centers in North America.

**Green IT Purchases: 26%** buy Green products only when they lower costs, save space or defer data center construction. But **34%** will buy Green products even if they increase costs.

**Cloud computing: 38%** of polled conference attendees are using some type of external cloud computing service.

**98% of 2008 attendees told us they would recommend the Data Center Conference to their colleagues!**

 Save the date. Gartner Data Center Conference 2009 taking place December 1-4 in Las Vegas! Be sure and bookmark the site [gartner.com/us/datacenter](http://gartner.com/us/datacenter), and check back in a few months for 2009 conference info!