

# Gartner Webinar

## Technology Trends You Can't Afford to Ignore

**January,  
2010**

**Raymond Paquet, Managing Vice President**

**Notes accompany this presentation. Please select Notes Page view.**

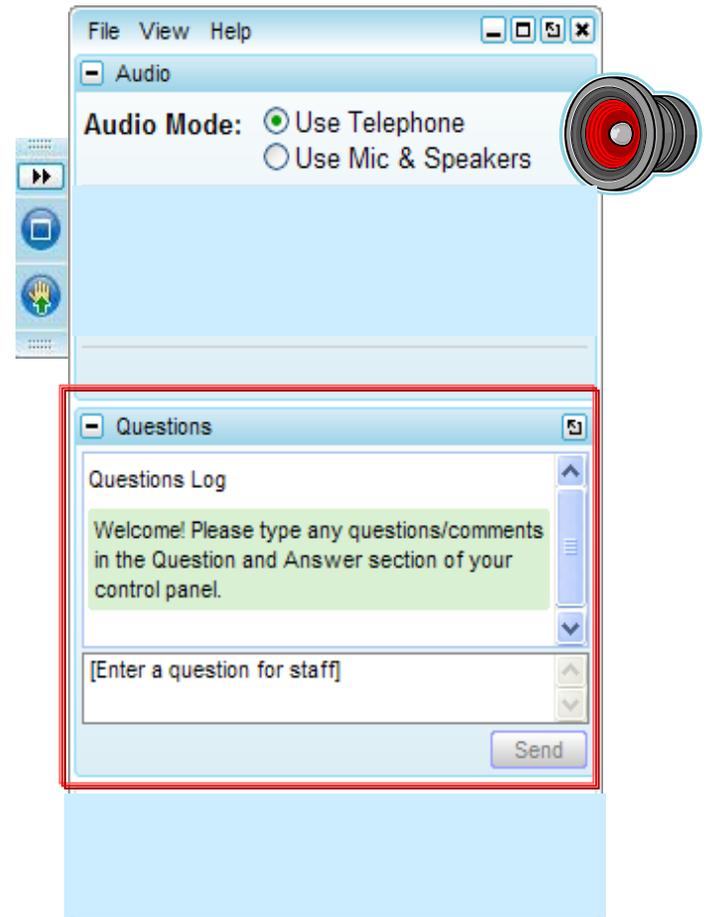
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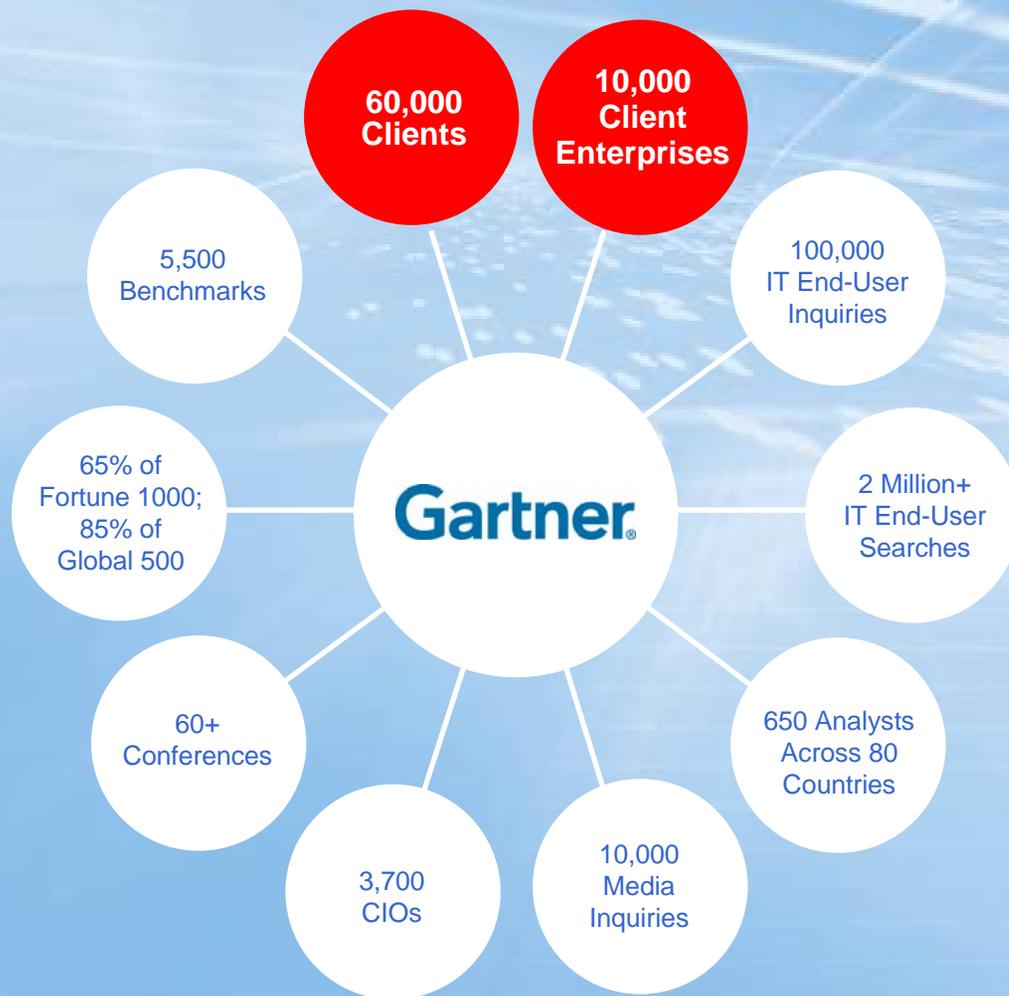
# Welcome!

## Here's how to participate in today's webinar

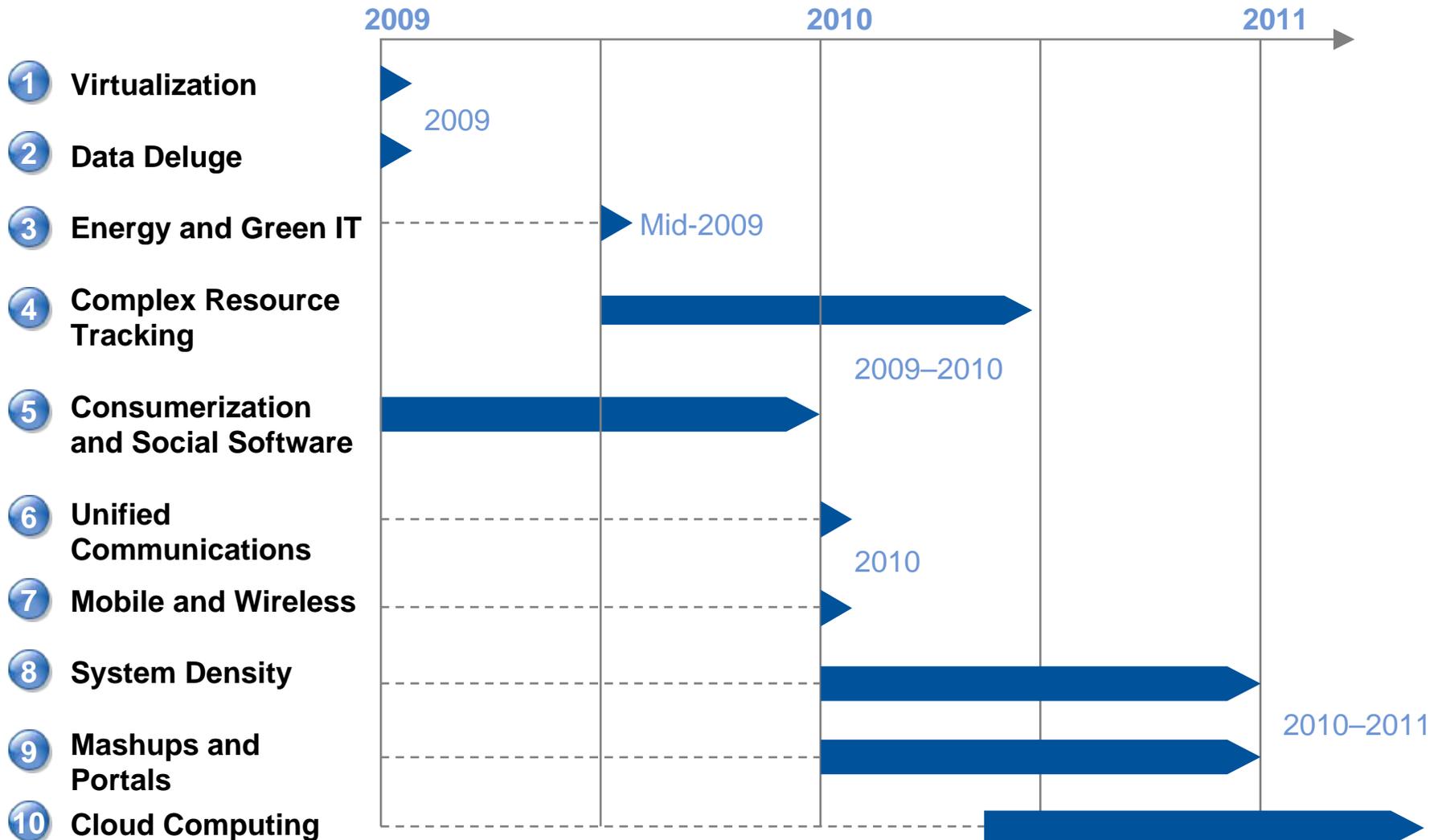
- You can listen to the presentation using your computer's speaker system as the default (VoIP).
- Or dial the conference line by selecting Use Telephone in the webinar audio pane.
- Have a question for the presenter(s)? Type it into the Questions pane—we will answer as many as time permits.
- A recording of this presentation will be sent to you within 48 hours.
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# Our world-class, objective insight is drawn from thousands of daily client interactions



# 10 Trends to Watch — Carefully





## Did You Know?

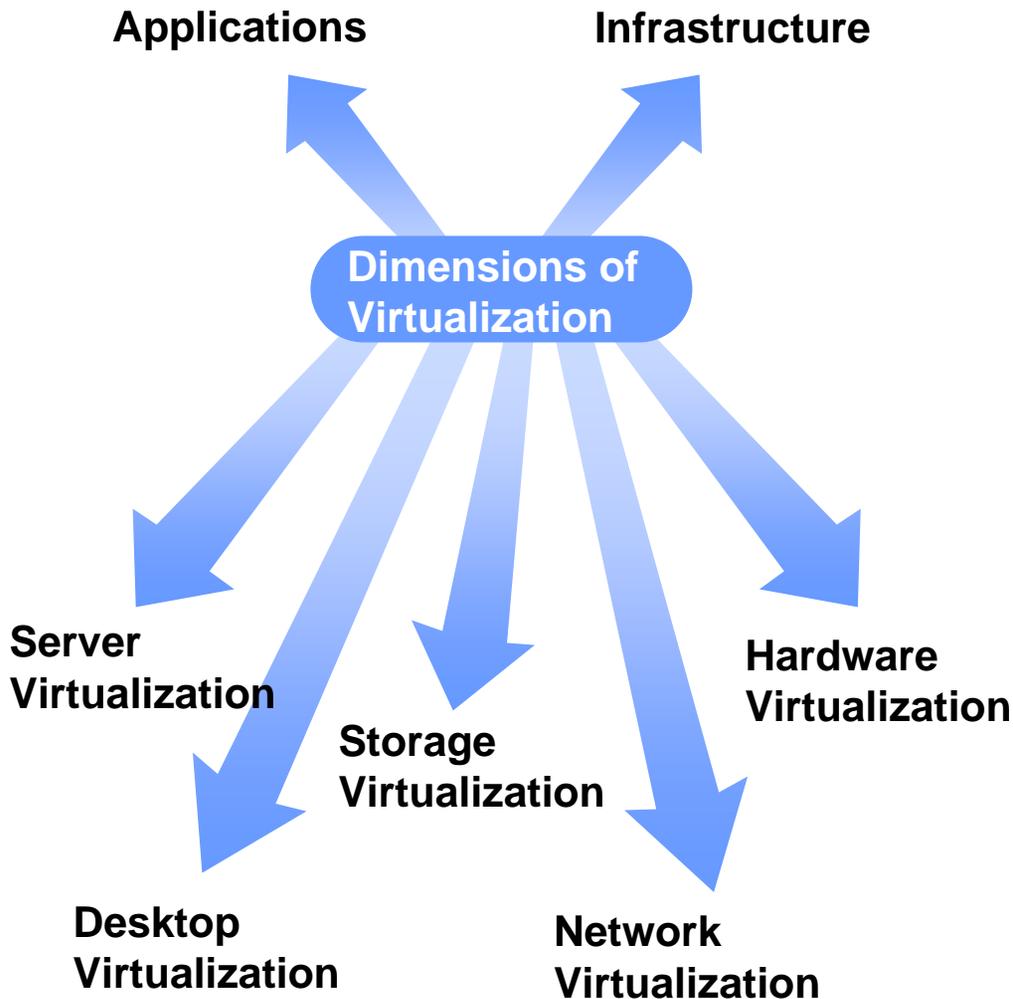
Percent Power Used: Typical x86 Server

**65%**

**Doing Nothing**

# Virtualization

1



## How does it affect you?

- IT becomes one logical system
- Changing how IT is used
- Additional "power" on demand
- Mgmt. Players: VMware, Microsoft Hyper-V, Citrix
- Plays well with green IT
- SMBs — ease of migration

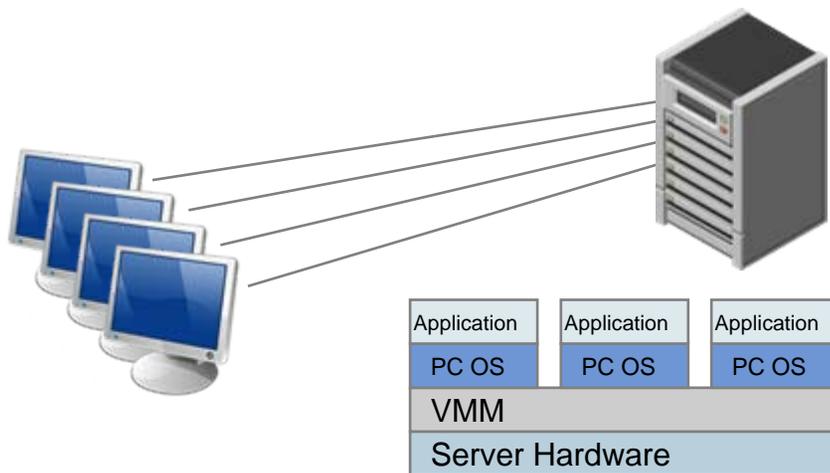
## Next Monday Morning

Review consolidation plans; can we do more? Do you have all the virtualization bases covered? Do we have a plan?

## Critical Timeframe

Now

# Virtualization — The New Client



## Hosted Virtual Desktops

- Architectural equivalent of the blade PC
- Full "thick client" image, thin-client delivery model

## Portable Personalities

- Carry the bubble, not the hardware
- Portable media, stored on the network
- Bubbles of various sizes, some with OS, some without

## How does it affect you?

- Long-term, flexible workforce
- Reduced operating complexity
- Standards alignment, audit and control

## Next Monday Morning

Evaluate multiple options — create test environments

Get end users involved for real-world analysis

## Critical Timeframe

2010



## Did You Know?

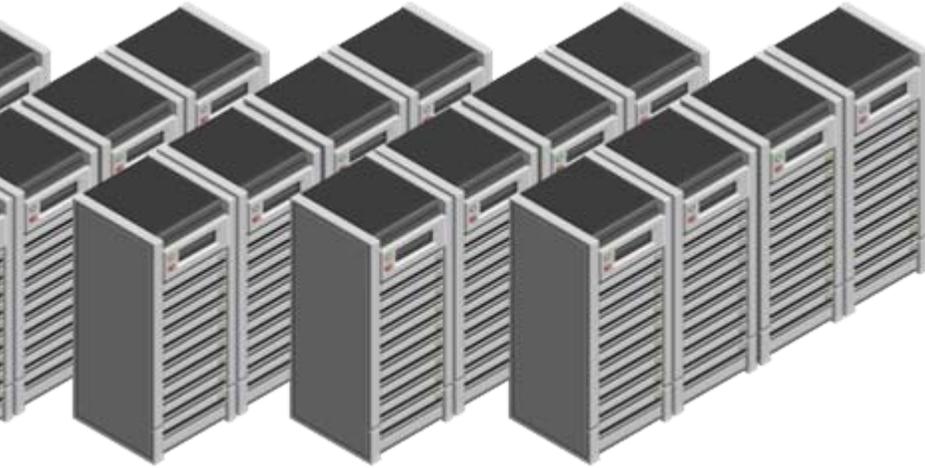
Estimated Enterprise Data Growth in Five Years?

**650%**

80% Will be Unstructured!

# Data Deluge

2



## Key Technologies

- Thin provisioning
- Data deduplication
- Automated tiering
- HSM principles
- Virtual tape

## How does it affect you?

- Complexity continues — regardless of budget constraints
- Demand driven — more access creates more data — this will get worse
- Compliance, backup, audit, security

## Next Monday Morning

- Virtualize storage quickly
- Deduplication soon
- Evaluate *all* data inputs
- Keep only what you need
- Segment and prioritize

## Critical Timeframe

**Now**

# Energy and Green IT

$$\text{PPE} = \frac{\text{Useful Work}}{\text{Total Facility Power}}$$

*How Much Work Can My IT Equipment Do, In My Facility?*

Source: Gartner Inc.

- Power to Performance Effectiveness (PPE)
- Forced review of IT efficiency
- Intersection between facilities and IT
- Moved the power issue up the food chain
- Corporate social responsibility

## How does it affect you?

- Increased awareness/focus on power
- Compute to consumption ratios critical
- EU or EPA metrics are coming
- New KPIs based on efficiency

## Next Monday Morning

- Begin evaluation of PUE and/or PPE
- Begin continuous improvement planning
- Focus on consumption, rather than technologies

## Critical Timeframe

2009–2010

# Complex Resource Tracking

- Monitor Energy consumption.
- Visualize power consumption of resources.
- Automate energy usage to optimal levels.
- Dynamically move workloads.

## How does it affect you?

- New KPIs based on power
- New vendors and skills needed

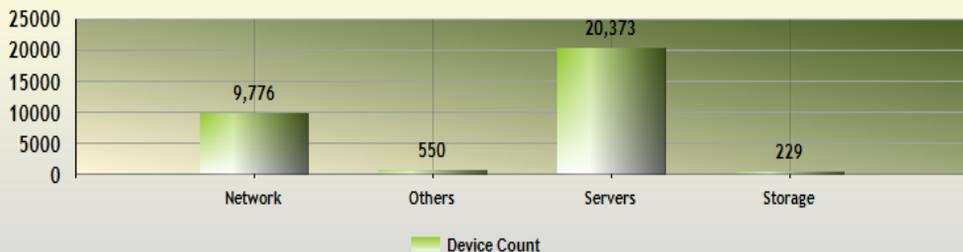
## Next Monday Morning

- Get to know your facilities team
- Begin market research
- Watch EPA and EMU Initiatives

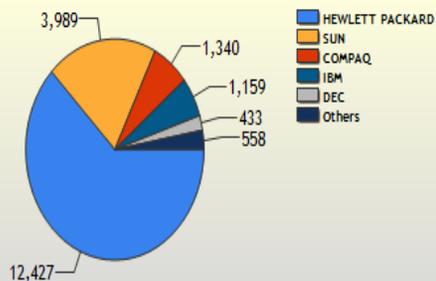
## Critical Timeframe

2011–2013

IT Assets



Servers by Manufacturer



Server Power Usage by Manufacturer

Manufacturer	Server Count	Power (kW)	Avg.Power (kW)
HEWLETT PACKARD	12,427	5,253.28	0.42
SUN	3,989	1,343.20	0.34
COMPAQ	1,340	502.58	0.38
IBM	1,159	346.30	0.30
Others	558	176.81	0.32
DEC	433	120.56	0.28

What was the fastest growing social network in 2008?

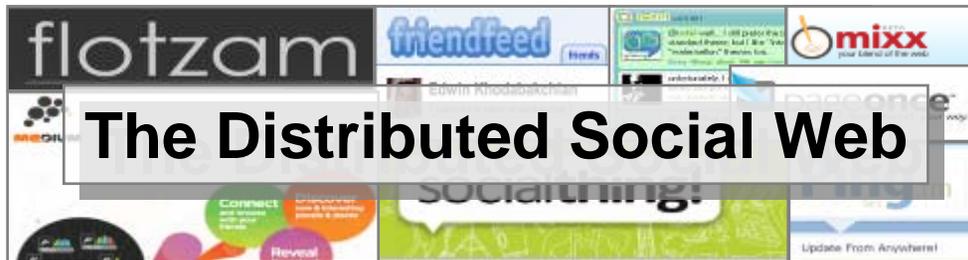
**1,382%**

twitter

**62% of New Users are between 39 and 51**

# Social Software: A Factor Inside and Outside the Enterprise

5



## Social collaboration

- Wikis
- Blogs
- Facebook
- Twitter

## Social media

- Content sharing (tags)
- Content aggregation

## Social validation

- Social rating, ranking, commentary
- Social content structure
- The collective

## How does it affect you?

- It's affecting you now, and increasing rapidly
- Early pattern detection
- The "Collective" matters

## Next Monday Morning

- Establish rules of engagement
- Begin monitoring, look for signals
- Begin participating
- Bring a social dimension to your internal and external websites

## Critical Timeframe

2010–2012



## Did You Know?

The number of text  
messages sent in  
the past 24 hours...

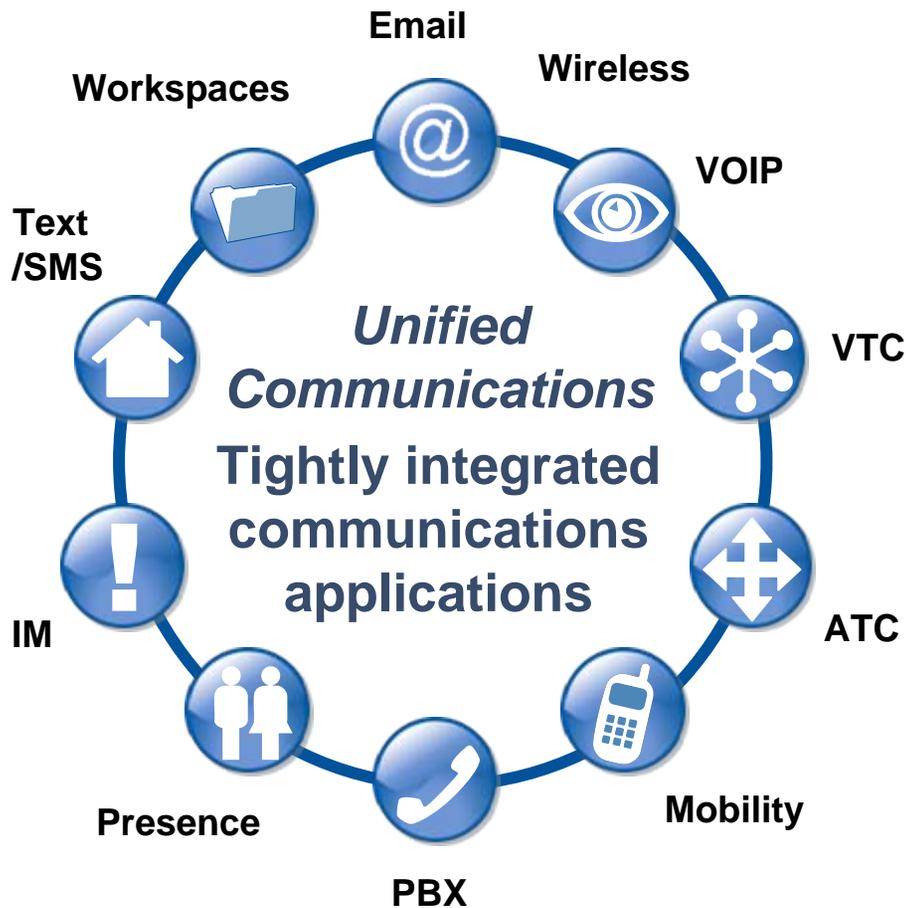




..exceeded the total  
population of the planet.

# Unified Communications and Collaboration

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## How does it affect you?

- Combines many overlapping areas
- A technology and organizational issue.
- Strong area for managed services to take hold

## Next Monday Morning

- Are your apps providers planning for taking advantage of unified communications? What's their strategy?
- What other UC business scenarios make sense in your business?

## Critical Timeframe

2011–2013

# Mobile and Wireless



Thousands of new applications are coming online. Text messaging is not a convenience, it's a way of life.

## How does it affect you?

- Mobile applications need new servers for delivery
- Application delivery complexity
- Immature management tools
- The next target for virtualization

## Next Monday Morning

- What's your strategy for supporting mobile applications?
- Look at mobile apps as a critical enabler of client interaction, and satisfaction

## Critical Timeframe

2010–2012



## Did You Know?

"At current pricing, the operating expense (energy) to support an x86 server will exceed the cost of that server ..."

**... within three years!**



## Did You Know?

Energy cost per year can exceed:

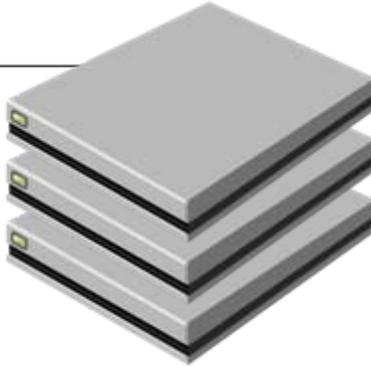
**\$105,000**

**for just two racks of servers.**

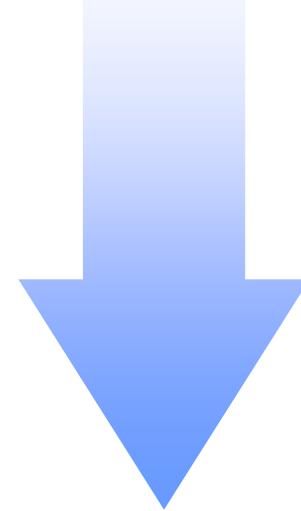
# Blades Are Leading Toward Componentized Servers

**Blades = Servers**

**2009**



Today, blades are proprietary server-infrastructure-in-a-chassis solutions...



**Blades = Servers, storage switches, memory, I/O...**

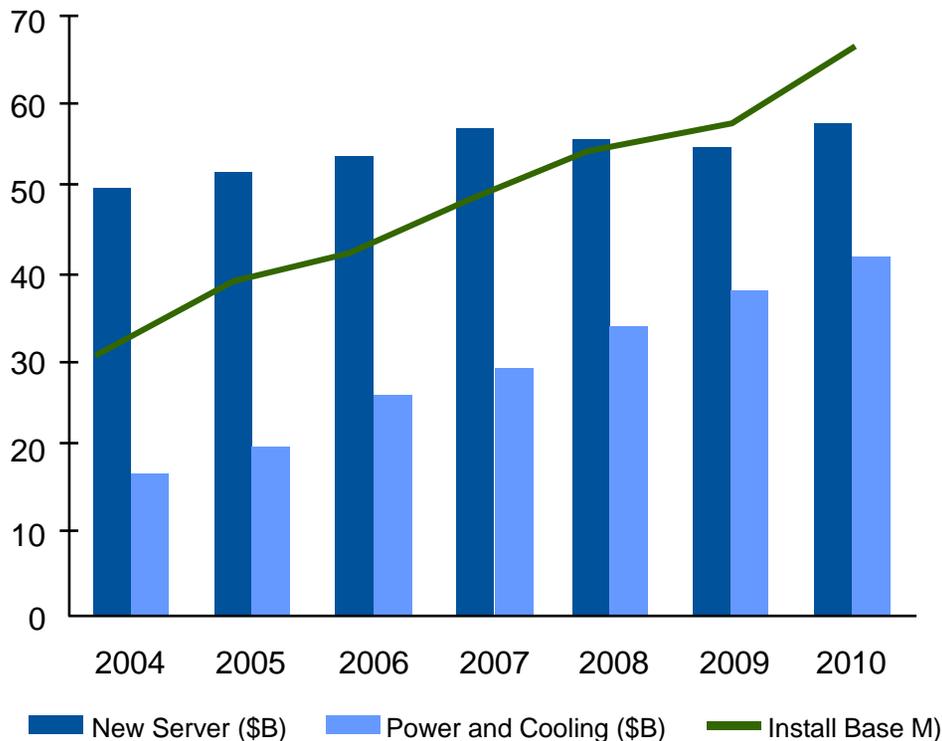
**2013+**



...but they are evolving into componentized, data-center-in-a-chassis solutions (but still mostly proprietary).

# System Density

## Server and Power Growth



### How does it affect you?

- Virtualization is critical to success
- Trend is high-density, high use of floor space
- Utilization levels and compute to energy ratios paramount by 2010

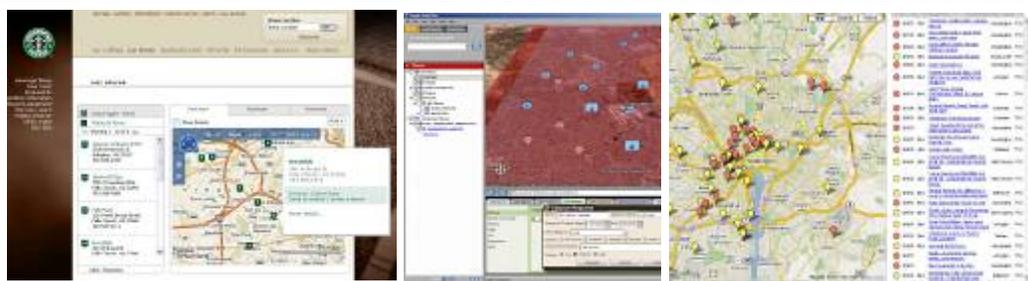
### Next Monday Morning

- Analyze asset use (highs and lows).
- Map server growth to energy and cooling required
- Engage facilities team

### Critical Timeframe

2011–2012

# Mashups and Enterprise Portals



## Enterprise value

- Private cloud enabler
- Rapid/flexible development

## Application types

- Packaged application extension
- Personal portal delivery
- Location awareness

## Integration patterns

- Visualization integration
- Content integration
- Gadget page space co-location

## How does it affect you?

- Customers doing this today
- Unrecognized business processes
- Creeping standards, uncontrolled
- Internal and external sources

## Next Monday Morning

- Evaluate use; highlight the best
- Set clear standards — encourage innovation

## Critical Timeframe

2010-2011

# Cloud Computing

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## Cloud Computing

A style of computing where scalable and elastic IT-enabled capabilities are delivered as a service to customers using Internet technologies

### How does it affect you?

- Common services are available now — may reduce operating expenses
- Private clouds improve agility and will dominate
- Focus on service levels
- Ignore the hype — focus on results

### Next Monday Morning

- Evaluate commodity services you provide and what can move to the cloud
- Evaluate cloud delivery model for internal use
- Categorize applications/services based on SLAs and risk before proceeding

### Critical Timeframe

2011–2013

# Private Clouds

Through 2012, IT organizations will invest more on private cloud services than on external cloud providers.



## Reasons for Private Cloud

- Low barrier to entry
- Elastic and scalable
- Lower cost and pay per use
- Increased agility (to customers)
- Ease of sourcing migrations
- Many cloud benefits — reduced risks



## Reasons for Public Cloud

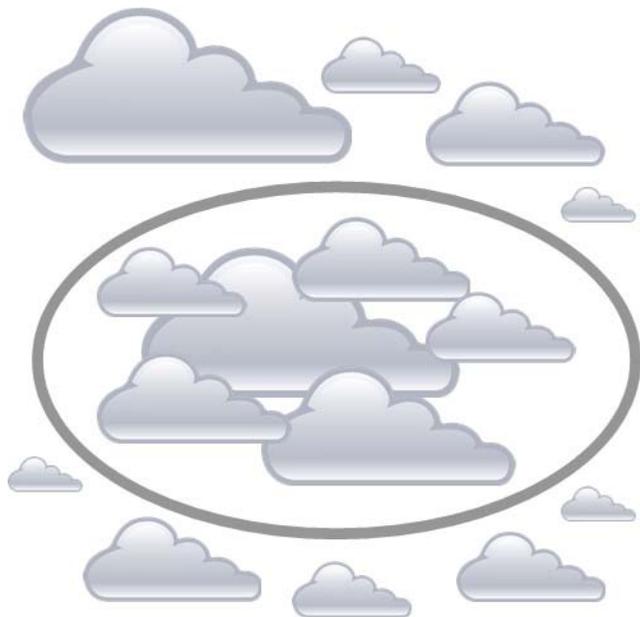
- Scale on demand
- Increased agility and flexibility
- Pay per use
- Higher compute capacities
- Elasticity
- Time to market

# Future Challenge: Managing Cloud Sourcing

10

## Client/server: customer-driven

- Costs skyrocketed, little integration



## Cloud computing: going around IT

- Lots of choices, little integration, little understanding of real service requirements
- Failures will be rampant, unless IT involved

## Service Brokers

- *Small enterprises*
- Evolution of today's system integrators, VARs
- Orchestrates cloud providers to meet needs
- Industry-specific, etc.

## Dynamic Sourcing Team

- *Large enterprises*
- New team, new skills (business- and IT-savvy)
- Manages day-to-day sourcing decisions

# Action Plan

- **Today**

- Focus on virtualization and green IT for immediate cost and flexibility benefits.
- Look at storage virtualization, deduplication and thin provisioning.
- Evaluate Web social software to transform customer/employee interactions.

- **The Next 18 Months**

- Exploit mashups and cloud-based services to address immediate user needs.
- Link UC to collaboration and enterprise applications to support growth initiatives.
- Begin to track weak signals and subtle business patterns — from everywhere.

- **Longer Term**

- Public and private cloud services together with new servers and specialized systems promise to minimize costs and maximize agility.
- Apply more-sophisticated resource analytics to support ongoing improvement in operational costs and energy efficiency.
- Look for opportunities emerging from cloud computing, social networking and new approaches to infrastructure.

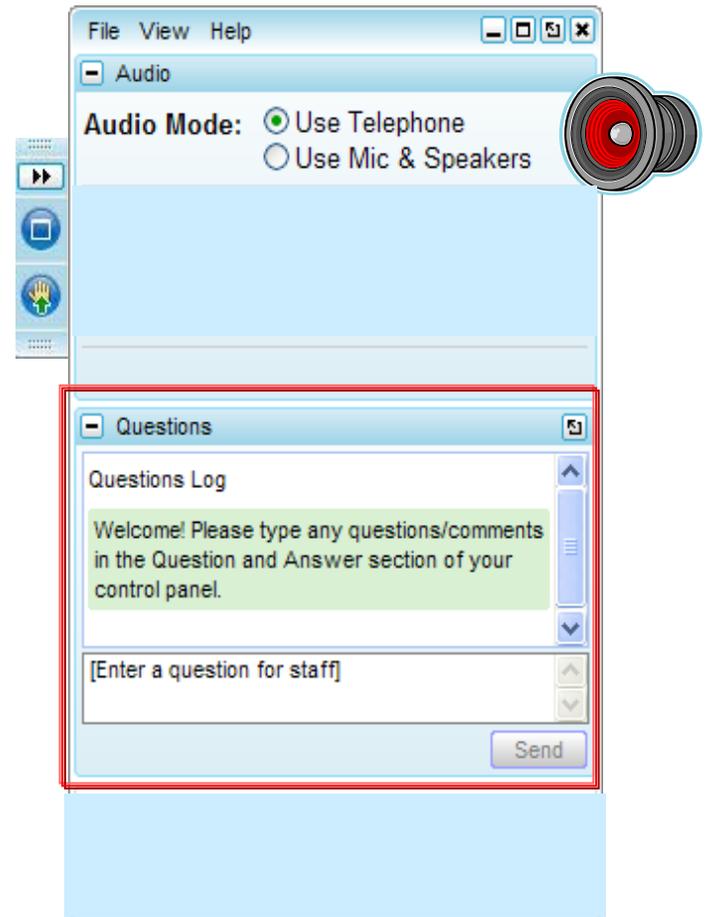
# Related Gartner Research

- ➔ ***Magic Quadrant for Unified Communications***  
*1 September 2009, ID Number: G00169996*
- ➔ ***Run Book Automation Reaches the Peak of Inflated Expectations***  
*20 August 2009, ID:G00169977 — David Williams*
- ➔ ***Modernize Your Data Center Network by Virtualizing Network Functions***  
*24 August 2009, ID:G00166882 — Neil Rickard*
- ➔ ***Data Center Efficiency and Capacity: A Metric to Calculate Both***  
*18 September 2009, ID:G00164493 — Dave Cappuccio*
- ➔ ***The Spectrum of Public-to-Private Cloud Computing***  
*14 May 2009, ID:G00167187 — Tom Bittman*

# Thanks for participating!

## Do you have any questions?

- If you haven't done so already, please type your questions into the Questions pane.
- We will answer as many of your questions as time permits.



# Looking to reduce your IT costs? Gartner can take the cost out of IT in four ways

The screenshot shows a Gartner website page with a blue header. The main title is "IT and The Economy" with a subtitle "Cost Optimization". A featured video section shows Kurt Potter, Research Director, discussing the "Four Levels of Cost Optimization". Below this, there are several sections: "Cost Optimization Spotlight" with a link to a methodology article, "Cost Optimization Fundamentals" with links to articles on budgeting and preparing for business growth, and "Key Issues for Cost Optimization, 2009". A central "Actions You Can Take Now" section lists four numbered items: 1. Get the best pricing and terms, 2. Identify opportunities to reduce IT costs, 3. Implement cost-saving technologies, and 4. Restructure, improve processes, innovate. A "Webinars" section at the bottom lists a webinar on modernizing IT while on a budget. On the right side, there are sections for "Join the Dialogue", "Stay Connected" with social media links, "Stay Up To Date" with event listings, and "Set up Email Alerts" for various IT topics.

- Get the best pricing and terms for your IT purchases
- Identify major cost-saving opportunities
- Implement cost-saving technologies
- Implement cost-saving process improvement

# Two simple steps for increasing the value of today's webinar experience

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