

INDUSTRY TRENDS: HOW ENTERPRISES ARE ADOPTING CLOUD COMPUTING

Presented by

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OVERVIEW

- What is the Cloud?
- What is Cloud Computing?
- How Companies Adopt It?
- Case Studies
- What the Future Looks Like

WHAT IS THE CLOUD?

- A Sea Change
- Disruptive technology
- Analogy: “From Steam power to electricity on the factory floor”
- “. . . the glue that connects the web of devices that users choose to access during the different aspects of their daily life.”

Steve Kleynhans, VP Research , Gartner

HOW BIG IS CLOUD MARKET GROWTH

Total Cloud Spending:

| | |
|---------|---------------|
| 2009 | \$58 billion |
| 2010 | \$68 billion |
| 2011 | \$77 billion |
| 2016est | \$240 billion |

Source: Gartner, Visiongain

HOW BIG IS THE CLOUD MARKET

➤ London School of Economics Study(2010)

Using smartphones as a cloud industry proxy forecast:

Annual Job Growth for 2010 – 2014

| | |
|---------|-----|
| U.K. | 70% |
| Germany | 56 |
| Italy | 54 |
| U.S. | 34 |

GARTNER REPORT: MEGATRENDS 2012

- A New Style of Personal Computing in the Cloud
- Consumerization
- Virtualization
- Ever available self service cloud
- The mobility shift
- Require enterprises to fundamentally rethink how they deliver applications and services to users.

PUBLIC VS PRIVATE CLOUDS

Cloud services are often developed in one of two ways:

- **Private clouds**

- apps, data and necessary infrastructure are dedicated to a single party

- **Public clouds**

- data and apps of non-related parties may reside on the same servers and more likely managed by a third party

WHAT IS CLOUD COMPUTING?

- Cloud computing is a style of computing in which scalable and elastic IT-related capabilities are provided "as a service" to customers using Internet technologies.

David Cearley, Gene Phifer, Gartner, 2012

WHAT IS CLOUD COMPUTING?

BASIC CATEGORIES OF DELIVERY:

- IaaS – Infrastructure as-a-Service
- PaaS – Platform as-a-Service
- SaaS – Software as-a-Service

Source: KPMG, 2011

IaaS – Infrastructure as-a-Service

➤ Infrastructure provided

- Fundamental computing resources such as servers, desktops, and network equipment
- Consumer able to deploy and run arbitrary software
- Scalable up or down
- Service providers: EC2: Amazon Web Services
IBM Smart Business Test Cloud
Rackspace
GoGrid

PaaS – Platform as-a-Service

Platform provided:

- The capability provided is to deploy onto the cloud consumer-created applications using programming languages and tools supported by the provider
- Service Providers: Force.com (salesforce.com)
Google App Engine
Windows Azure (Microsoft)

SaaS – Software as-a-Service

Applications on-demand:

- eliminates the need to install, run, and maintain programs on internal systems
- Formerly known as ASPs
- Service Providers: Google Apps
Salesforce.com
Zoho.com

CONSENSUS BENEFITS OF CLOUD COMPUTING

- Reduced costs
- On-demand scaling/handling peaks
- Disaster recovery
- Deployment flexibility

KPMG STUDY: CLARITY IN THE CLOUD (2011)

806 executives responded that:

81% had already moved some activities to the cloud

17% expected 2012 investment “to skyrocket, with some planning to spend over a fifth of their IT budget on the cloud”

10% were already running entire core IT services on the clouds

13% said the process was underway

WHAT COMPANIES BELIEVE THAT CLOUD COMPUTING WILL DO

- Reduce costs
- Change interaction with customers and suppliers
- Accelerate time to market
- Provide management with greater transparency on transactions
- Fundamentally change the business model

KPMG, *“Clarity in the Cloud”*, 2011

WHO ARE THE LEADERS?

SERVICE PROVIDERS:

- AMAZON
- SALESFORCE (SaaS market)
- GOOGLE
- RACKSPACE
- MICROSOFT (PaaS and SaaS market)

NEXT TOP PROVIDERS OF CLOUD COMPUTING

- GoGrid
- Verizon

Source: Gartner, 2011

HOW DO COMPANIES ADOPT IT

CASE STUDY: KPMG Client

- Results using cloud as a supplier network
 - Reduced latency between and among suppliers
 - Reduced lead times on information exchange from 30 days to 1 day
 - As demand changes at the store, all parties see and act upon the changes
 - Resulted in more product getting to the right place at the right time with less inventory through the supply chain

THE CASE OF RAZORFISH

Background/Driver

- Improve ability to respond quickly to customer demands for web campaigns
- Support high volume short run campaigns more cost effectively

Process/Solution

- Used Rackspace as a cloud infrastructure platform.
- Build Blogs, Microsites, campaign-related pages for large companies, such as Southwest Airlines, H&R Block

Result/Benefit

- Set up reduced from 4-6 weeks to 24 hours
- On average at 25% of previous cost

Key Lesson:

If you are moving web-centric applications with solid security and management practices, you can move them with little deviation to cloud infrastructure

THE CASE OF HR ANSWER LINK

Background/Driver

- Need to deliver a number of HR applications in a SaaS model, but a traditional approach would take 24 months to deliver

Process/Solution

- Private implementation of Longjump
- Built cloud application services for HR to be delivered through their partner channel

Result/Benefit

- Developed in 4½months vs. 24 months
- Able to provide a highly customizable service to their customers
- Focus development on application design instead of infrastructure, database and security model design

Key Lesson:

- The cloud can be used to deliver highly customizable services

CLOUD COMPUTING

WHAT THE FUTURE LOOKS LIKE?

WHAT GAERTNER THINKS

- “The projected \$1 trillion IT services market is at the beginning of a phase of further disruption, similar to the one the low-cost airlines have brought in the transportation industry.”
- **By 2015, low-cost cloud services will cannibalize up to 15 percent of top outsourcing players’ revenue.**

WHAT CLOUD COMPUTING HAS NOT DONE

- Overcome questions about security
- Created user trust

LinkedIn: Sample from Cloud Computing Group, 2012

WHAT OTHERS THINK

MARK ANDERSON, THE STRATEGIC NEWS SERVICE, 2012

- *Clouds Are for Consumers (and Startups).*
- Even as a large number of enterprises move pilots onto external clouds, it will become clear that the real trend is for enterprise *to stay away from clouds in all key areas*, for reasons both of security and reliability.

CONCLUSIONS: MISRA AND MONDAL

- Highly important for a company to remain competitive in today's business scenario.
- To remain competitive it needs to embrace the latest technologies, methodologies, processes, and applications,
- Managers need to be very dynamic to take the best decisions to accelerate changes in business processes.
- Changes vary from minor adjustments to revolutionizing the entire business, systems and processes.
- They need tools which would assist them with proper decision making.

Source: *Identification of a company's suitability for the adoption of cloud computing and modeling its corresponding Return on Investment*,
S.C. Misra, A. Mondal / Mathematical and Computer Modeling 53 (2011) 504–521