



Developing Cloud Strategies To Meet YOUR Business Objectives

UNIVERSITY
OF
CALIFORNIA

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Agenda

- Cloud Primer
- Emergence of Cloud Services
- What's the Problem?
- Business Paradigm Shift
- Value Drivers
- Calculating Return on Investment
- Risk Assessment
- Cloud Strategies

A perspective view of two long rows of server racks in a data center, with a blue sky and white clouds in the background. The racks are dark blue and have a repeating pattern of horizontal slots.


World's information is doubling every two years

IDC iView "Extracting Value from Chaos," June 2011, sponsored by EMC.

A perspective view of two long aisles of server racks in a data center, with a blue and white wavy graphic at the top and bottom of the image.

1.8 trillion gigabytes will be created and replicated

IDC iView "Extracting Value from Chaos," June 2011, sponsored by EMC.

A perspective view of two long rows of blue server racks in a data center, receding into the distance under a bright sky with white clouds. The racks are illuminated from below, creating a sense of depth and scale.

70% of IT budgets are typically spent on maintaining current IT infrastructures, and only 30% are typically spent on new capabilities

*IBM White Paper "Capturing the Potential of the Cloud,"
June 2010*

15% of data centers don't have any backup or recovery plan, 30% don't have backup sites

AFCOM survey of 360 data center managers

URL: www.pcworld.idg.com.au/article/385766/data_center_double_duty

Only 26% of respondents reported any decrease in hiring based on cloud adoption

2011 North Bridge Venture Partners – Future of Cloud Computing Survey

URL:www.businesswire.com/news/home/2011/20110622006602/en/

future-cloud-computing-survey-reveals-drivers-cloud.

Cloud Primer



What is Cloud?

- Utility computing/pay for what you use
- Outsourced manageability and maintenance
- Easily adjusts to fluctuating and unpredictable business demand
 - Elasticity and agility

Cloud Primer

- **Private**
 - Serves a single organization
 - Can be internally managed or outsourced
 - Services built upon virtualized, managed infrastructure
 - Self-service provisioning of resources
 - Usage metering for cost allocation

Cloud Primer

- **Public**
 - Serves multiple tenants
 - Comprised of one or more data centers
 - Utility consumption model
 - Commoditization of services
 - E-mail
 - Storage
 - Software
 - CPU, RAM, network bandwidth

Cloud Primer

- **Hybrid**
 - Combination of local and remote resources
 - May rely heavily on bandwidth
 - Strategic alternative to pure private or pure public cloud
 - Can be used as a Proof of Concept (POC)

Emergence of Cloud Services

- Infrastructure as a Service
- Platform as a Service
- Software as a Service
- Disaster Recovery as a Service
- Storage as a Service
- Network as a Service
- Security as a Service
- Communications as a Service
- Database as a Service
- Monitoring as a Service
- Printing as a Service...

What is the Problem?

- Increasing Scope and Complexity of Business Needs
- Technology is fast approaching a Commodity State
- Inability to Satisfy and Sustain Staffing Demands
- Aging Workforce
- Budgetary Constraints

= Doing More with Less

Business Paradigm Shift

- Owned Assets vs. Subscribed Services
- Technology Driven vs. Business Driven
- Broad and Deep IT Skills vs. Specialized Services (Commodity State)
- Long Deployment Cycles vs. Real Time Delivery

Value Drivers

- **Private**
 - Standardized service delivery
 - Optimized utilization
 - Reduced cost of power, cooling, and real estate
 - Improved manageability
 - Reliability and fault tolerance
- **Public/Hybrid**
 - Access to skilled professionals and services/applications
 - Opex vs. Capex
 - Rapid deployment
 - Proof of Concept (Try before you buy)

IT tends to think about IT investments in terms of cost-recovery, which is a wonderful thing. But the biggest benefit of private cloud computing is not going to be lower costs.

*Thomas Bittman,
Gartner Group*

Calculating ROI

- IT Budgets
 - System upgrades
 - Technology refresh
 - Technology initiatives
- Management efficiencies
- Cost benefits of scale
- Business and Technology agility
- Lower risk

Risk Assessment

“Ultimately, you can outsource responsibility but you can’t outsource accountability.”

Cloud Computing – Benefits, risks, and recommendations for information security ENISA

<http://www.enisa.europa.eu/activities/risk-management/files/deliverables/cloud-computing-sme-survey>

Risk Assessment

- **Security/Privacy**
 - Data protection standards
 - Audit standards
 - End to end encryption
 - Encryption at rest
- **Liability**
 - Security breaches
 - Notification
 - Remedies

Risk Assessment

- Portability of data
- Delivering on promises(SLA)
- Audit compliance
- Service termination or failure
- Integration

Cloud Strategy Takeaways

- Business-focused IT objectives
- Find the balance between fixed and variable costs
- Infrastructure agility
- Try before you buy
- Consider your Exit Strategy!

Questions?



ENS-Inc.

We're on your team!