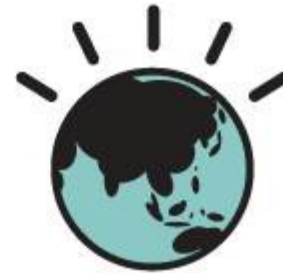




**IBM ASEAN
Leadership Exchange**



**Cloud Computing: Gain access to your
applications from anywhere, at any time**

**Willy Chiu
Vice President, IBM Cloud Labs & HiPODS**

July 23rd, 2009

IT infrastructure is reaching a breaking point

85% idle

In distributed computing environments, up to 85% of computing capacity sits idle.

1.5x

Explosion of information driving 54% growth in storage shipments every year.

70¢ per \$1

70% on average is spent on maintaining current IT infrastructures versus adding new capabilities.

\$40 billion

Consumer product and retail industries lose about \$40 billion annually, or 3.5 percent of their sales, due to supply chain inefficiencies.

33%

33% of consumers notified of a security breach will terminate their relationship with the company they perceive as responsible.

Cloud Computing – a Disruptive New Paradigm

“Clouds will transform the information technology (IT) industry... profoundly change the way people work and companies operate.”

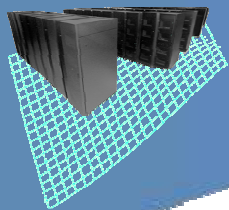
**The
Economist**

- *Provides massively scalable computing resources from anywhere*
- *Simplifies services delivery*
- *Enables rapid innovation of new business models*
- *Dynamic Infrastructure for next generation data centers*



1990

Grid Computing



Utility Computing



Software as a Service



2009

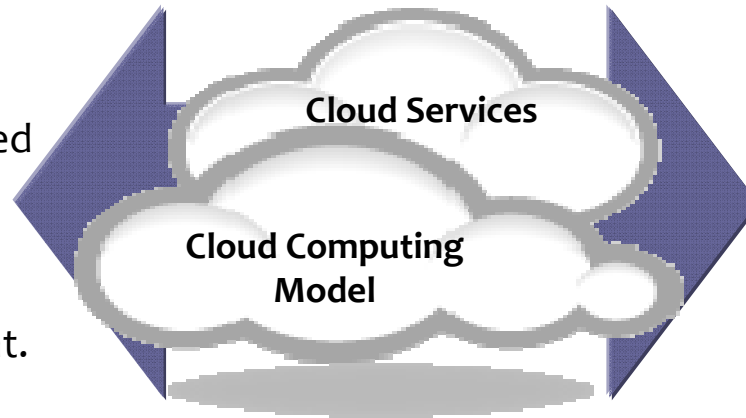
Cloud Computing



New consumption and delivery models drive new sourcing options and business flexibility.

Private ...

- Client owned – managed by client or services provider.
- Access defined by client.



Public ...

- Standardized services on the provider's cloud
- Access by subscription.

Considerations ...

- Security, privacy, resiliency
- Self-service
- Standardization

GOVERNANCE

IBM has invested to achieve insight, innovation and breakthrough solutions.

IBM transformation

- 155 data centers to five.
- 16,000 applications to 4,500.
- \$1.5 Billion savings.
- Technology Adoption Program “TAP cloud” for 110,000 employees.

“Project Blue Cloud”

- Hundreds of client engagements.
- 20 Cloud centers.
- Proof-of-concepts.
- IBM Research/ Client collaborations.

Academic Alliance

- Global collaboration.
- 27 Universities.
- 800+ students.
- NSF grants to 14 schools.



iTricity
Netherlands



Wuxi
China



VNTT
Vietnam



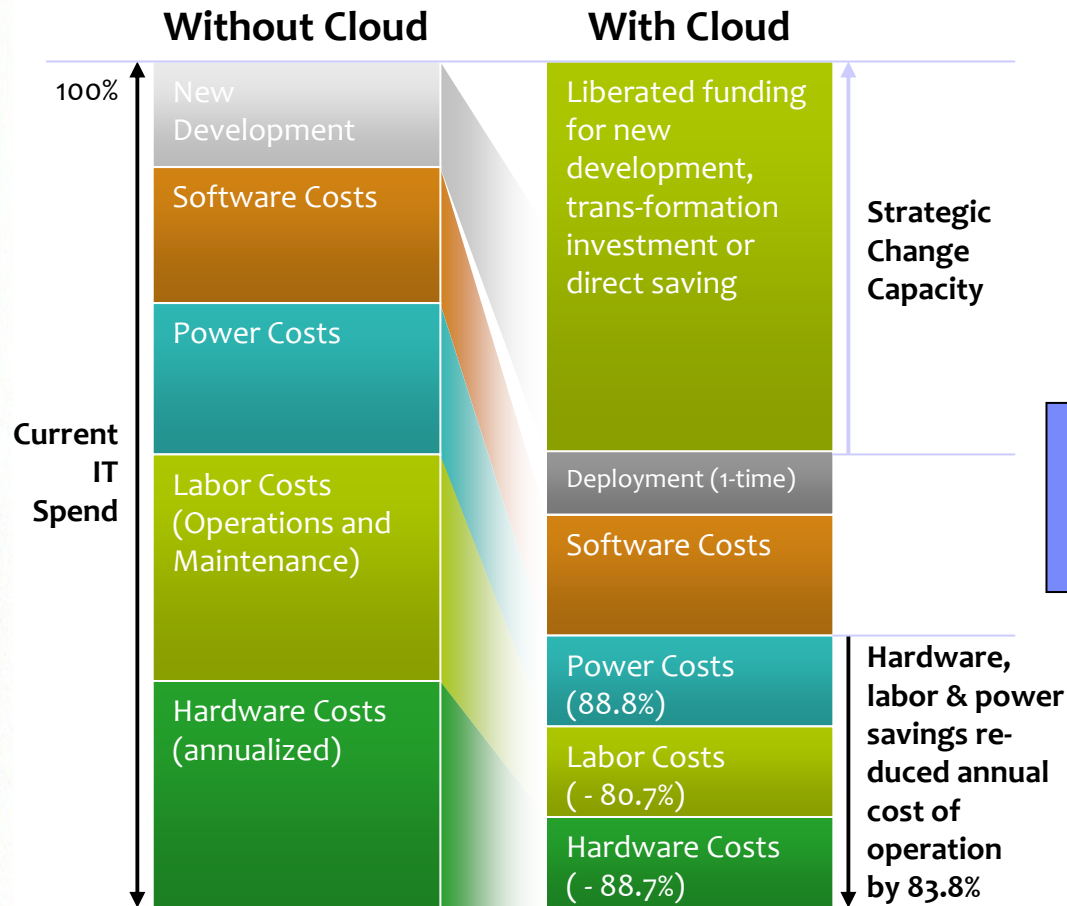
NedBank
South Africa



Carnegie Mellon
Qatar - Middle East

Client Success Stories: <http://www.youtube.com/ibmcloud>

Economic benefits of a Cloud Deployment



Note: 3-Year Depreciation Period with 10% Discount Rate

Case Study Results
Annual savings: \$3.3M (84%)
\$3.9M to \$0.6M



IBM Cloud for Software Development

Development
&
Test

Staging
QA

Production
Cloud
For
SW developers



IBM Power
Systems



System x,
BladeCenter



IBM
Storage



Networking

Virtualization

Service Automation & Standardization

Start Playing in the Sandbox

Already Using the Sandbox? Sign In >>

Instantly Deploy
to the Cloud

Create Instances and Start Developing

Watch the Demo

- 1,000 self service users globally
- 1,300 Virtual Machines
- Modular and scalable
- Resources provisioned in minutes
- System x , p, z (future)
- Automated zero touch operations
- 1.5 million VM hours in 3 months
- 50% growth monthly in VM hours
- From sandbox to serious usage
- Policies to change user behavior

Benefits

- Reduced development cycle time
- Reduced Capital Expenditure
- Reduced Operations Expenditure
- Improved Energy Efficiency

Demo - Application Development, Test and Delivery

Develop in the cloud

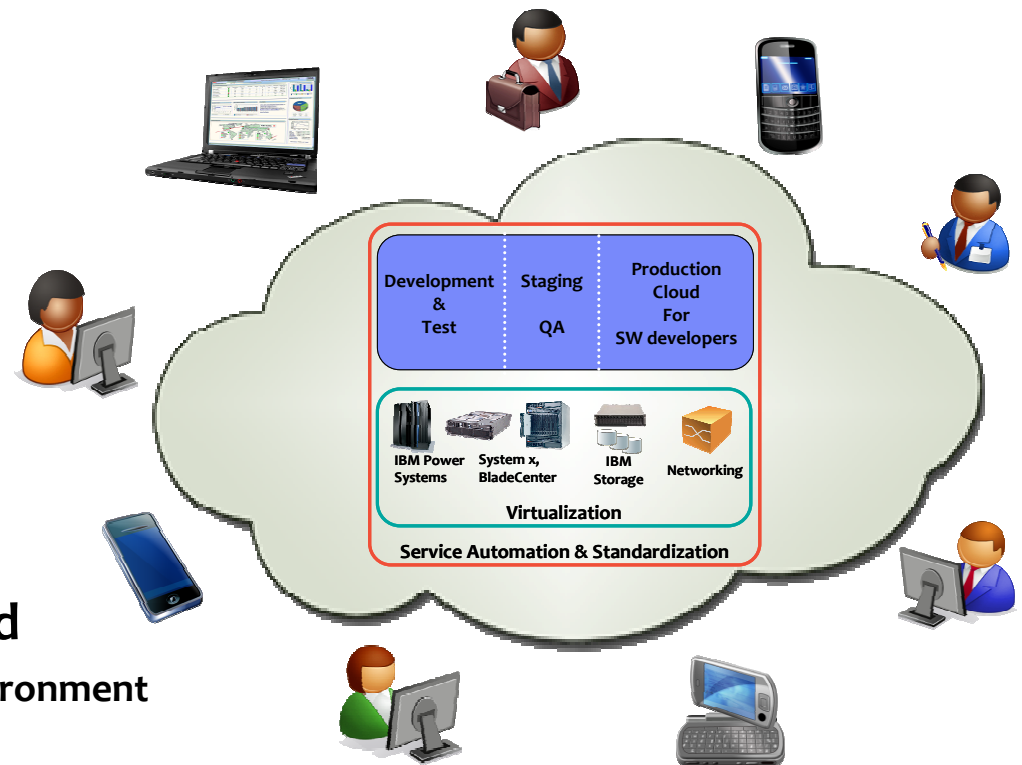
- User has single view into the cloud
- Integrated tooling and cloud services
- Catalog of standardized images & templates for re-use

Deploy and test in the cloud

- One click application provisioning
- Rapid deployment and optimization
- Knowledge sharing and best practices

Deliver services from the cloud

- Seamless transition to production environment
- Easily accessed from anywhere
- Service automation and standardization



Deployment - /Topologies/topologies/WASandDB2.topology - Rational® Software Architect™ for WebSphere® Software

File Edit Diagram Navigate Search Project Run Window Help

Tahoma 9 B A

Project E Relations

- eBanking
- eBankingEAR
- Topologies

WASandDB2

Developer Cloud Assets Servers Console

Search for Cloud Templates

Name	Requested
CR23	
CR25	
WASImage	
CR26	
Cloud Request Name	
WASandDB2Express	
WASDB2	
vm-9-30-210-187	Jul 6, 2009

Overview

Status: ACTIVE

Cloud: Developer Cloud [singhan@dpev124.innovate.ibm.com]

IP: 9.30.210.187

Hostname: vm-9-30-210-187.svl.ibm.com

Image: 15

Expiration: Jul 8, 2009

Client URLs

[SSH login](#)

Search Assets Not connected

<No Current Work>

Welcome

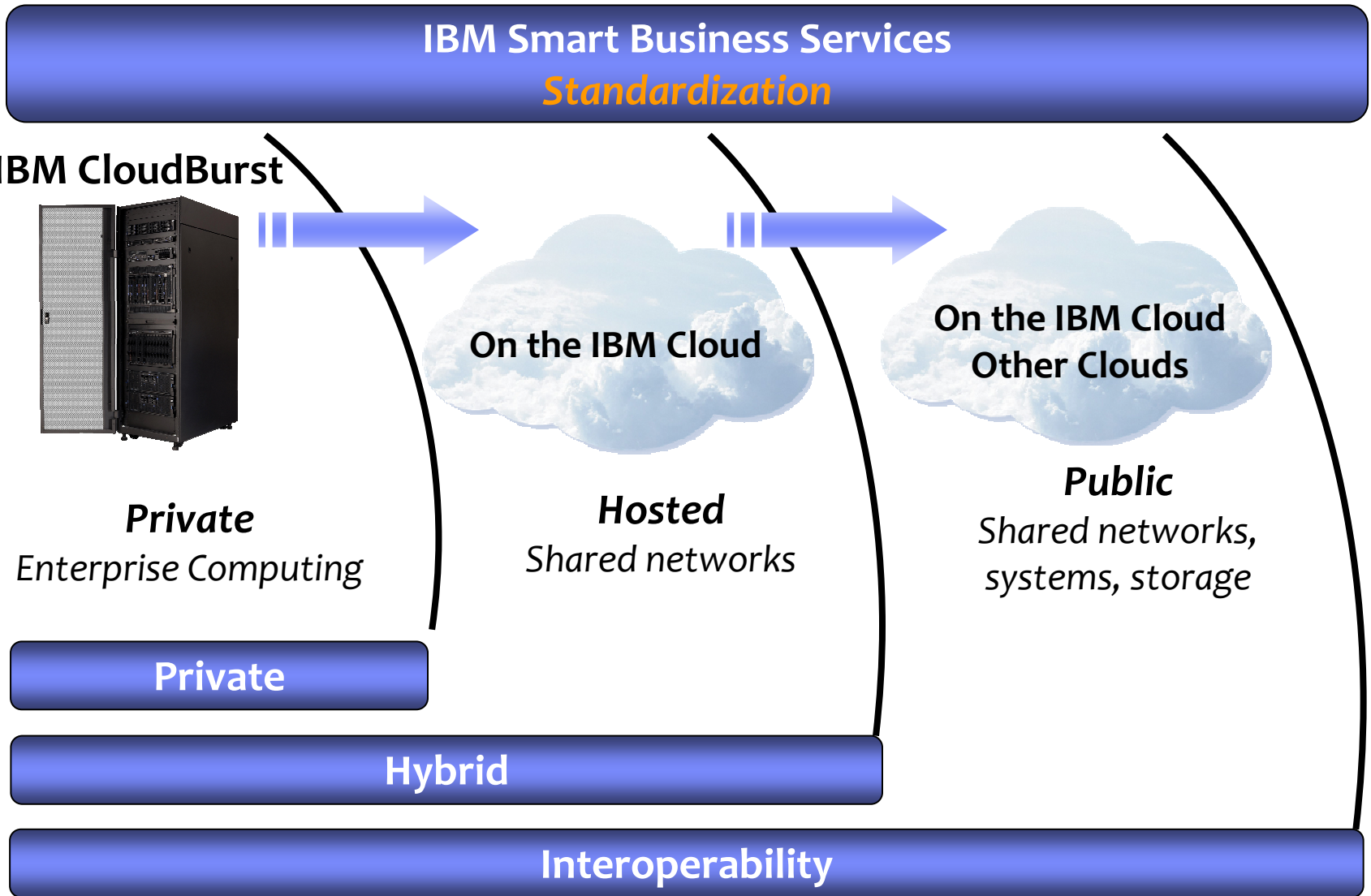
⌘ Loading...

Sign in to Cloud Management

⌘ Loading...









Businesses Adopt Cloud Computing in Stages



New Deployment Choices



						
	Analytics	Collaboration	Development and Test	Desktop and Devices	Infrastructure (compute / storage)	Business Services
Smart Business on the IBM Cloud <i>Standardized services on the IBM Cloud</i>		✓ Lotus Live	✓ Smart Business Development & Test on the IBM Cloud	✓ Smart Business Desktop on the IBM Cloud	✓ Information Protection Services; Computing on Demand	✓
Smart Business Cloud <i>Private cloud services, behind your firewall, built and/or managed by IBM</i>	✓ Analytics		✓ Smart Business Test Cloud	✓ Smart Business Desktop Cloud	✓ Scale out File Services	✓
Smart Business Systems <i>Pre-integrated, Service Delivery Platform</i>			✓ IBM CloudBurst		✓ IBM CloudBurst	✓ Smart Business for SMB (backed by the IBM cloud)

 Available
  Future

Introducing IBM CloudBurst

A Breakthrough in Service Delivery for Data Center Workloads

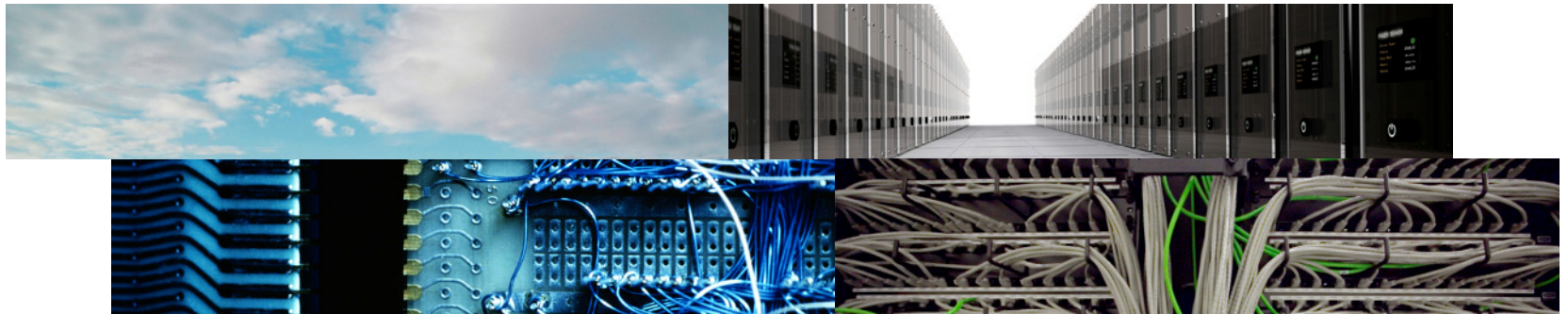
- **“Fit for purpose”**: Based on architectures required by specific workloads.
- **Self-contained**: Service management, software, hardware, storage, networking
- **Modular**: Automatically expandable and scalable
- **Virtualized**: End-to-end across server, network, and storage
- **Self-service**: Ease of consumption
- **“Lights-out”**: Zero touch automated operations



Based on IBM client cloud implementations

Going Forward...

- **Successful tops down corporate initiatives are driven by grass roots implementations**
- **Compelling customer economic value proofs are essential**
- **Cultural change must accompany technology shifts**



Explosion of Cloud Adoption Worldwide



Learn More: <http://www.ibm.com/cloud>