



# Cloud Computing

## GTS Services

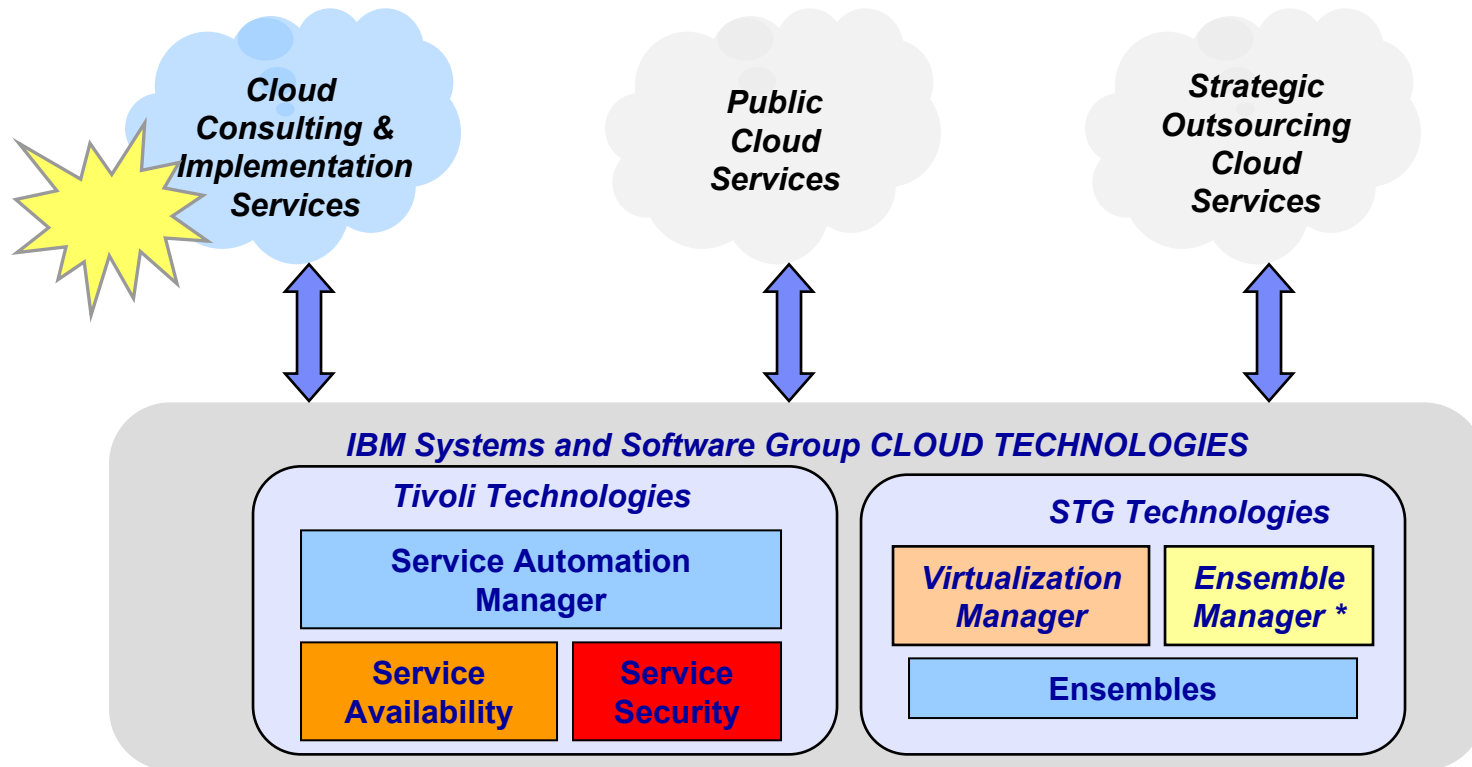
EMILIO LUCOTTI - Executive IT Architect

# Agenda

- Introduction on Cloud Computing
- **GTS Services**

# IBM Services delivers Cloud capabilities to our customers through 3 key Services channels:

- ❖ A set of project-based consulting and implementation services in order to help our customers create their own Private Cloud infrastructure as part of transforming their data centers
- ❖ Targeted Public Cloud Services delivered over the Internet to provide flexible/scalable offerings
- ❖ A Cloud delivery roadmap and services to deliver state-of-the-art data centers for our SO clients



# IBM Implementation Services for Cloud Computing - IBM Infrastructure Strategy and Planning for Cloud Computing

*Determine the best organizational value from a cloud delivery model*

## Features:

Executive workshop to answer the questions;

- Where will cloud work for me?
- What kind of returns will I achieve?
- How I could implement it?

Strategy,  
Business Case,  
Roadmap for  
Cloud



## Customer Benefits:

- Project the potential **cost reductions** cloud offers your organization
- Provide a business case for how cloud will **improve service delivery**
- **Identify the risks** and develop mitigation strategies within an implementation roadmap

## Determine the best organizational value from a cloud delivery model

# Infrastructure strategy & planning for cloud computing service

### Description

Helps IT leaders determine how their organization can best benefit from a cloud delivery model. Leverages and executive workshop to answer two key questions: Where will cloud work for me? What kind of returns will I achieve?

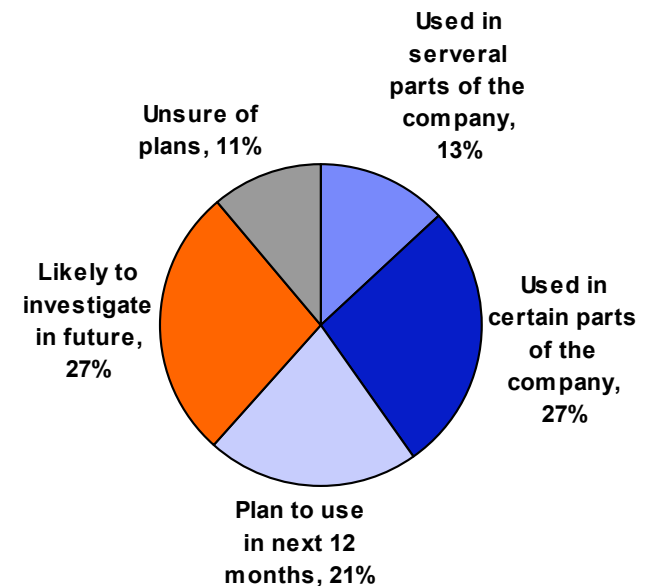
### Client value

- Project the potential cost reductions cloud offers your organization
- Provide a business case for how cloud will improve service delivery
- Identify the risks and develop mitigation strategies within an implementation roadmap

### Reasons to perform it

- Our workshop methodology is a low impact high return to ensure your cloud investments are optimized
- We provide you with both near-term business case assistance and also a roadmap to reach longer term objectives
- A complementary suite of cloud services to support consulting design, implementation and ongoing management of cloud environments based on our clients *and* our own experiences

### Current/ Anticipated Usage Of Cloud Computing



Source: IBM Market Intelligence, December 2008

# IBM Implementation Services for Cloud Computing – Design and Implementation for Test Environments

## Features:

- IBM Implementation Services for cloud computing – design and implementation for test environments enables a customer to build and operate a request driven infrastructure for delivering test resources to consumers. This includes an integrated and extensible platform which combines service request management, provisioning and change and configuration management.
- The shift to cloud computing is fueled by the dramatic growth in business collaboration, connected devices, real-time data streams, and Web 2.0 applications such as streaming media and entertainment, social networking and mobile commerce. Cloud computing represents a major step up in computing -- as it enables governments, businesses and individuals to access super-computing power, analysis of massive amounts of data, and applications five to ten times more cost effectively.

The test cloud services is designed to:

- Cut capital and operational costs and not impact mission critical production applications
- Offer new and innovative services to clients, and presents an opportunity to speed cycles of innovation and improve solution quality.
- Provide a request driven delivery of test environment infrastructure and associated services including operating system, middleware, storage, network, images and data



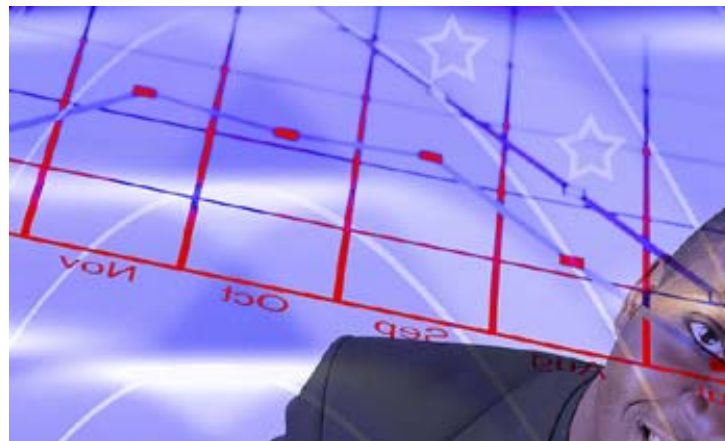
## Customer Benefits:

- **Reduce IT labor cost by 50% +** - reduce labor for configuration, operations, management and monitoring of the test environment
- **75% + Capital utilization improvement;** Significant license cost reduction
- **Reduce Test Provisioning cycle times from weeks to minutes**
- **Improve Quality-** eliminate 30% + of all defects that come from faulty configurations.

## These forces are driving change in testing services\*

**Market forces and the economy are putting cost pressures on companies to maximize their resources**

- The **scale** of dedicated testing resources has been growing rapidly
- Tight testing **timelines** still influence the length of time available for adequate testing
- Complex integration testing impacts **complexity** of test bed setup for variation challenges, dependency, and timing issues



\* Source - IDC 2008 *Industry Developments and Models – Global Testing Services: Coming of Age*

# How can cloud computing impact the test environment?

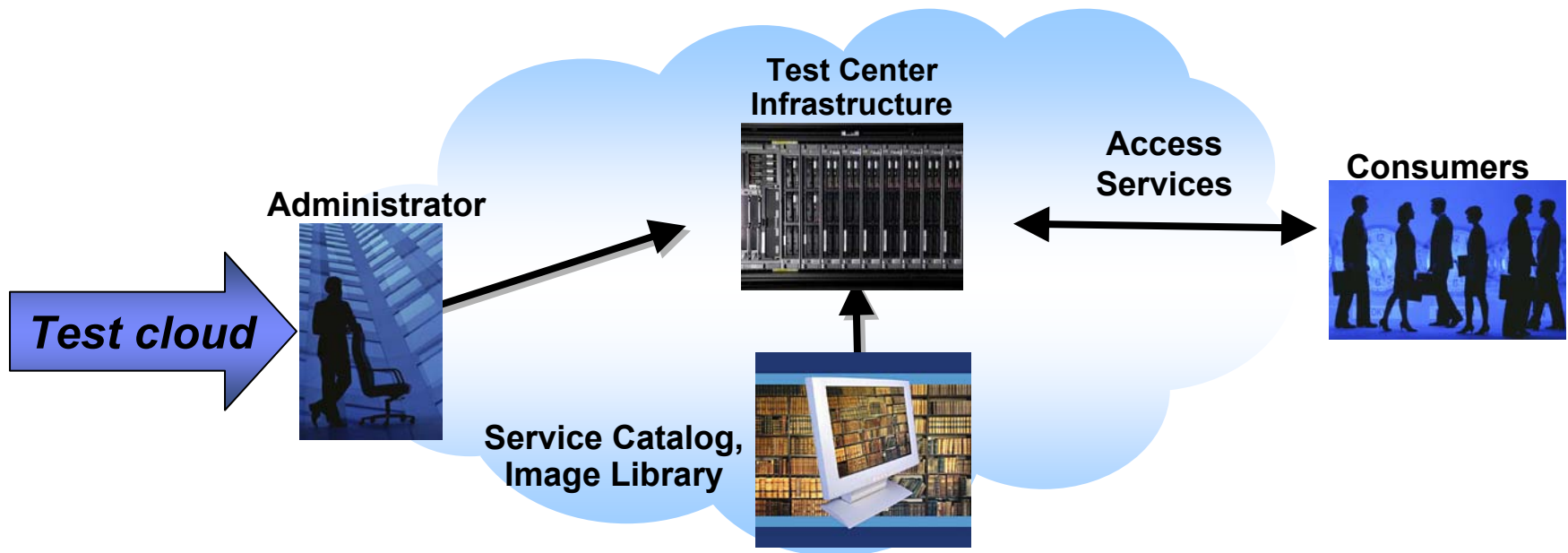
Common Attributes	Details
<b>Rapid provisioning</b>	Test resources are provisioned on demand, reducing test cycle time
<b>Advanced virtualization</b>	IT resources from servers to storage, network and applications are pooled and virtualized to provide an implementation independent, efficient infrastructure
<b>Service Catalog Ordering</b>	Uniform offerings readily available from a services catalog on a metered basis
<b>Flexible pricing</b>	Utility pricing, variable payments, pay-by-consumption and subscription models make pricing of IT services more flexible
<b>Elastic scaling</b>	Resources scale up and down by large factors as the demand changes



This service component provides a request driven infrastructure for delivering test resources to your consumers.

**A private test cloud containing system, storage network and images is built at your site. This includes:**

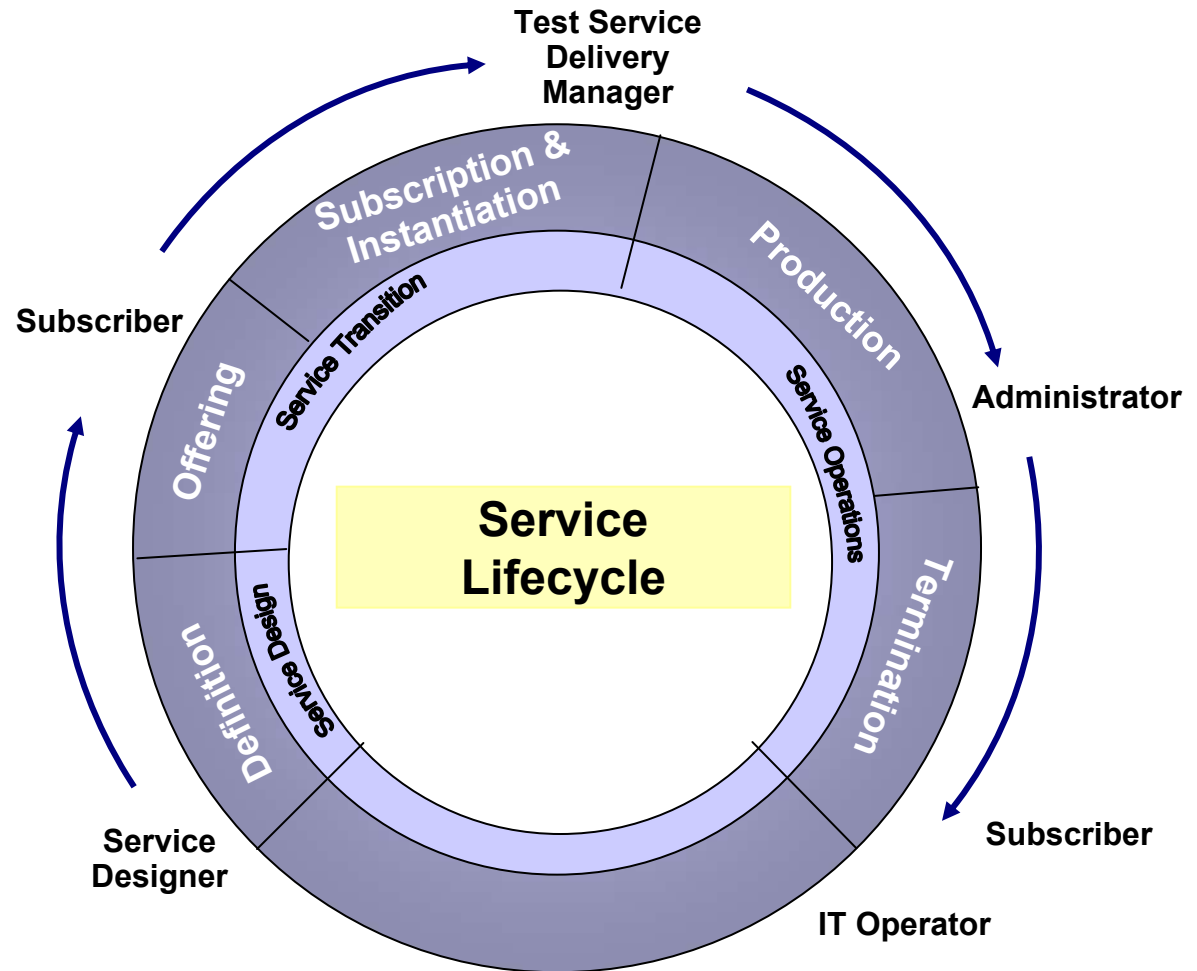
- An integrated platform which combines service request management, provisioning and change and configuration management allowing a integrated process
- A self-service portal for catalog based requesting of test resources
- Extensible automated and process platform



The following describes a typical customer usage scenario.

### Scenario Steps

1. Define services in the catalog
2. Services are released to end users
3. Request initiated from user, process or workflow
4. Resources can be scheduled or reserved
5. Provision resources. This can include:
  - Infrastructure: systems
  - Software: operating system, middleware
6. De-provision resources



## How can this service benefit my business?

Benefit	Proof Point
<b>Reduce Capital Expenses</b>	By provisioning test servers on-demand and ensuring unused servers are re-provisioned, you maximize capital usage. A major financial customer was able to <b>save in capital costs and drive utilization up 75 percent on Windows and 25 percent on AIX</b> (IBM's Unix implementation).
<b>Reduce Operating Expenses</b>	By automating the provisioning of test resources you attack a key variable cost that has an impact on your bottom line - IT labor costs. This allows you to redirect key resources from manual configuration activities to more mission critical and value-added tasks. The IBM Collaboration Innovation™ cloud <b>cut operating expenses by 79 percent.</b>
<b>Reduce Test Cycle Time</b>	The development and test cycle is a critical path to innovation and the market. Decreasing cycle time directly drives time-to-market and competitiveness. A major telecommunications customer reported that automating the deployment of System p® and storage resources allowed them to <b>go from a cycle time of 5 days to 20 minutes.</b>

# Achieving the efficiencies of cloud computing with:

*IBM Implementation Services for cloud computing – design and implementation for test environments*

- **Design and implementation services to build a cost effective test environment based on cloud computing**

- Integrated platform which combines service request management, provisioning and change and configuration management allowing an integrated process
- Self-service portal for catalog of services for users
- Extensible automated and process platform

- **Business value**

- Reduce operating and capital costs
- Improve test cycle times delivering benefits back to business more quickly
- Better quality with automation and modeling
- Mitigate risks of the human error factor

- **Why IBM**

- Pre-integrated set of services from planning through management for your test environment
- Unmatched IBM testing skills and best practices in a test environment
- Hardened services delivery methods for design and deployment of integrated cloud solutions
- Integrated solutions architecture and tools for accelerating deployment

**Reduce cost by 20%+**

**Improve test provisioning time from days to minutes**

**Reduce risk with automation**

