

IBM

# **Tivoli Service Automation Manager and IBM Service Delivery Manager**

**Providing Business Value for  
Service Management**

**in**

**Virtualization and Cloud Computing**

**Opportunities**

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Virtualization, IT Optimization and Cloud Computing



## Agenda

- Problems facing customers
- Tivoli Service Automation Manager
- IBM Service Delivery Manager



## Pressures on IT today...

- Conflicting demands in your business; users want resources, executives want innovation and the CFO wants lower costs
- Concerns about your organization's ability to meet the demands of your users
- The inability to complete critical projects on time because skilled personnel are performing mundane manual tasks
- The need for greater flexibility in the IT infrastructure to respond to dynamically changing conditions



***...Many IT managers are exploring cloud computing to address these critical challenges***



# IBM Tivoli virtualization and cloud management significantly lowers cost...

## Traditional Infrastructure

- x86 servers – one application per server
- 5% hardware utilization
- Manual operations & maintenance

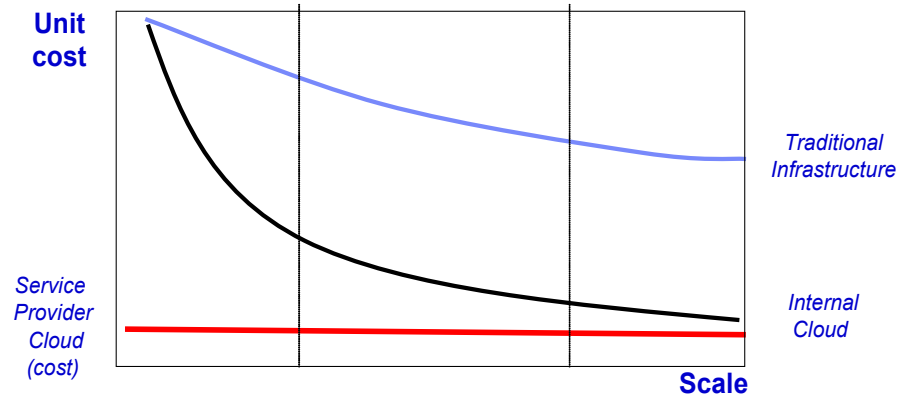
versus

## Internal Private Cloud

- x86 servers – full virtualization
- Embedded service management system
- Automated self service

## Internal Private Cloud drives cost savings

- Can reduce IT labor cost by 50% in configuration, operations, management and monitoring
- Can improve capital utilization by 75%, significantly reducing license costs
- Reduce provisioning cycle times from weeks to minutes
- Can reduce end user IT support costs by up to 40%



Large enterprises can significantly reduce costs for some workloads compared with traditional IT



# Tivoli Service Automation Manager

## Provides the software capabilities to request, fulfill, and manage cloud and virtualization services

- Simplifies user interaction with IT
  - User friendly **self-service interface** accelerates time to value
  - **Service catalog** enables standards to drive consistent service delivery
  
- Delivers provisioning to enable automation to lower cost
  - **Automated provisioning** and de-provisioning speeds service delivery
  - Provisioning **policies** allow release and reuse of assets
  
- Integrates with key offerings to deliver advanced capabilities
  - Included with **IBM CloudBurst**
  - Integrated with **WebSphere CloudBurst Appliance**
  - Integrated with **Tivoli Usage and Accounting Mgr**



*Let's examine these features in more detail...*



# Self-Service Portal and Service Catalog

## Starting point for automated service workflows

Allows end users to use IT services without being an expert in IT

Select	Name	Hypervisor	CPUs	Memory	Storage
<input checked="" type="radio"/>	Master IL Image (Red KVM)		4	4.9 GB	80 GB

Users can see what resources are available in the service catalog, request the services they need, when they need them, for the time they need them

### Tivoli Service Automation Manager

- GUI enhanced with Web 2.0 to improve ease of use
- Reservation of resources to allow deployments to be scheduled for a future date to simplify deployment

*...Improves customer satisfaction by accelerating service delivery with automated workflows*



# Deliver Services Faster using Automated Workflows

Wait time for services decreased by an average 98%\*

## Traditional Infrastructure

- Fill out paper request
- Call IT daily to check status
- Hope hardware is available
- Provisioning is manual and inconsistent



Fill out required forms

## Tivoli Service Automation Manager

- Automated with self serve portal
- Track workflow status online
- Services when you need them
- Provisioning is automated with implemented standards



Request/track services online

\*Based on IBM Research study 2009

## Service catalog drives standards

### **Lack of standards leads to problems... here is a real life client example**

A Critical new application is being developed

- The Developer looks for system resources and finds old out-of-date development environment
- During production deployment, IT discovers the application won't run in the current production OS
- To meet project demands, the out-of-date environment configuration is put in production to satisfy the critical business need



### **Versus:**

- The Service Catalog contains standardized images and environments that are automatically updated
- The Developer gets a "production standard" environment when needed with an outstanding user experience via the self serve portal



***...standard services avoids unexpected problems***

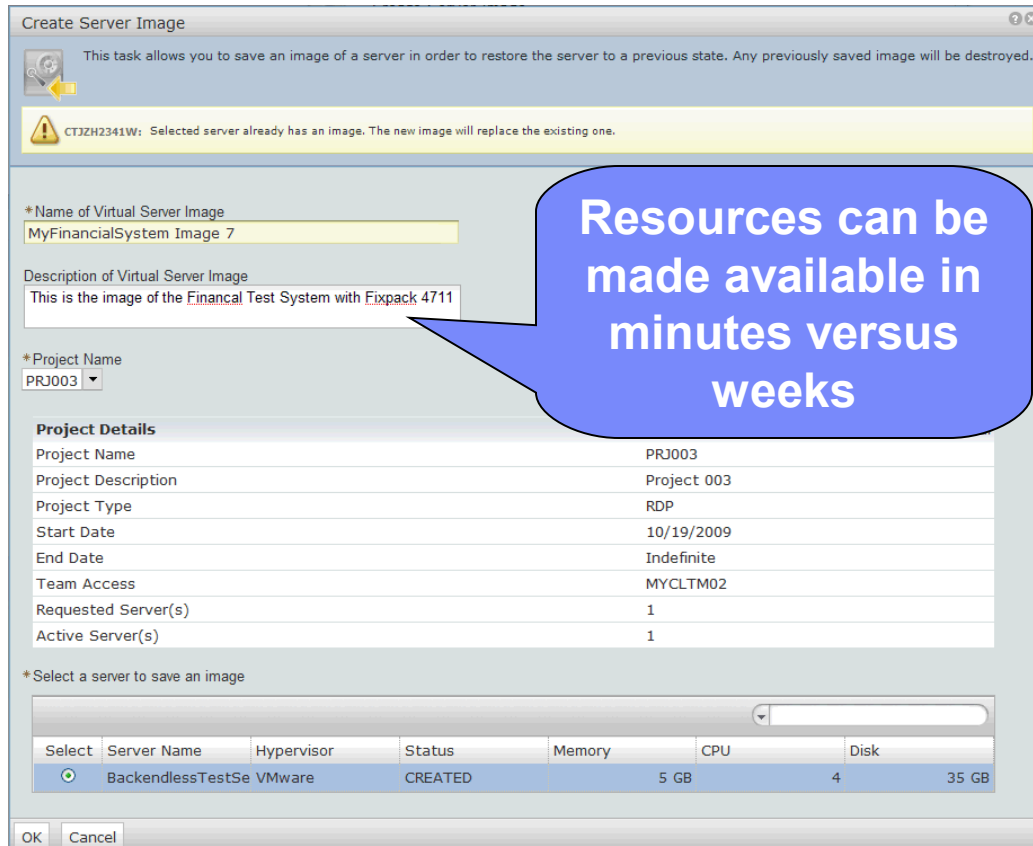




# Automated Provisioning

## Enables automation of complex provisioning tasks

### Library of scenarios available for common provisioning tasks



## Tivoli Service Automation Manager

- Image management functions including save and restore to help improve administrator productivity
- Includes Tivoli Provisioning Manager

*...Speeds delivery of services via easy-to-use provisioning*

# Provision systems faster, with lower cost and consistent quality

Lowers provisioning cost by an average 51%\*

## Traditional Infrastructure

- Experts deploy and configure
- Many error prone steps to execute
- Long lead time required



Manually configure systems

## Cloud with Service Management

- Automation does the work
- Provisioned consistently every time
- Available when customer needs it



Automation does the work

\*Based on IBM Research study 2009



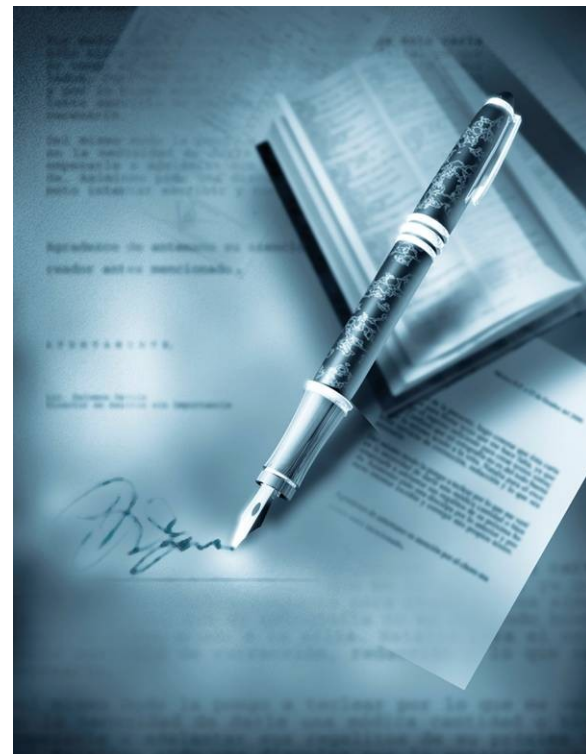
## Leverage automated provisioning to set policy

Have policies for provisioning new images

- Policy action: Before existing image is provisioned always check and apply new patches

Instead of having resources sit idle for months

- Policy action: At end of scheduled time:
  - Take image of environment to allow for recreation
  - De-provision resource and return to pool



***...consistent policies improves service quality and reduces costs***



# Integration with Metering, Usage and Accounting

Leverage integration with Tivoli Usage and Accounting Manager to:

- Understand costs, track, allocate and invoice by department, user and many additional criteria.
- Collect, analyze and bill based on usage and costs of shared assets
- Deliver detailed information and reports about the intricate use of shared resources



***...provide data for planning, budgeting, billing and accurate chargeback for services***

# New and Improved in this Release

## Tivoli Service Automation Manager

Accelerate deployment of management stack through automation of post-install configuration

Additional support for network topologies for security, and isolation for customers, service providers and internal accounts, like compute cloud.

Support for multiple Virtual Local Area Networks

Extend TSAM's strategic value by adding support for STG's VMControl to serve our broad set of IBM platforms (initially System p, then System x and later System z).



# Tivoli Service Automation Manager lowers cost and drives significant ROI for cloud computing

- Three key focus areas of cloud ROI that Tivoli Service Automation Manager supports:
  - Productivity – Automate service requests
  - Provisioning - Delivers services faster with better quality
  - System administration – Lowers cost of cloud services administration

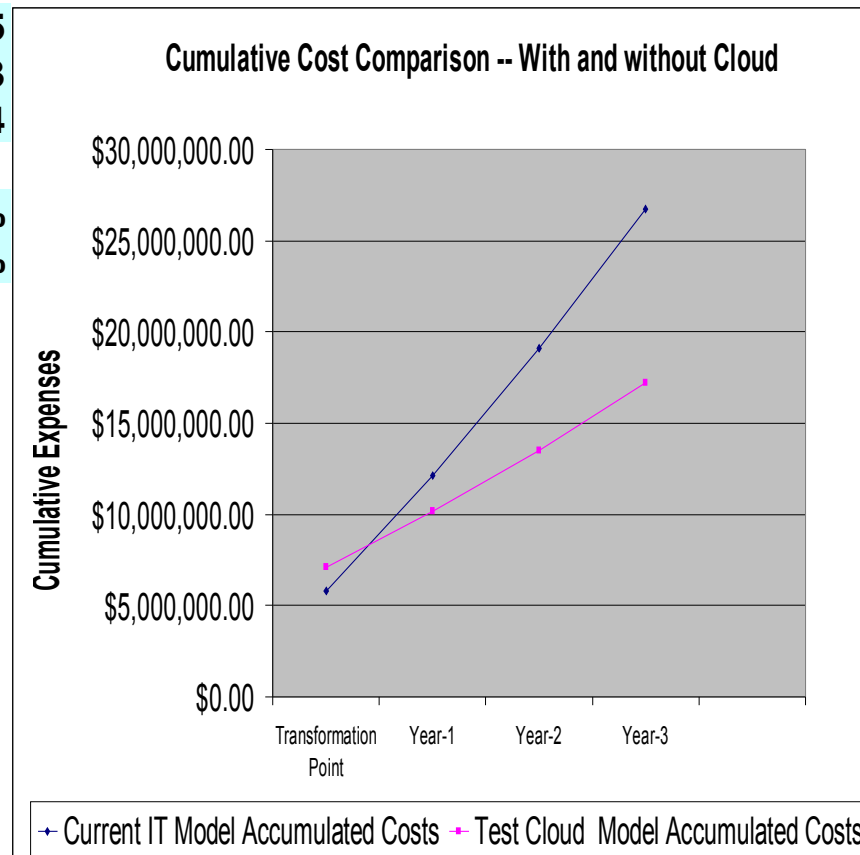
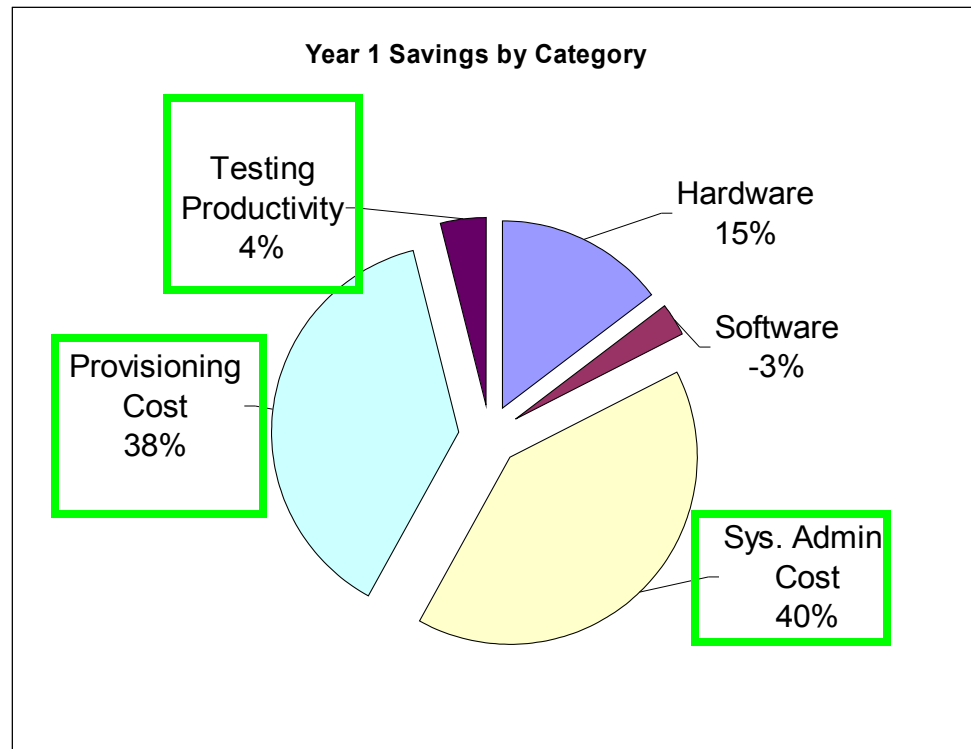


***On average, 81%\* of Cloud payback is driven by savings enabled by service management. Let's look at some ROI examples....***

# ROI analysis example- Banking (large # of servers)

Payback Period (months)	→ 4.85
Total Initial Investment for Test Cloud	\$1,313,958.33
Net Present Value (NPV)	\$6,172,325.64

Estimated ROI over 3 years	469.75%
Estimated avg. annual ROI	→ 156.58%

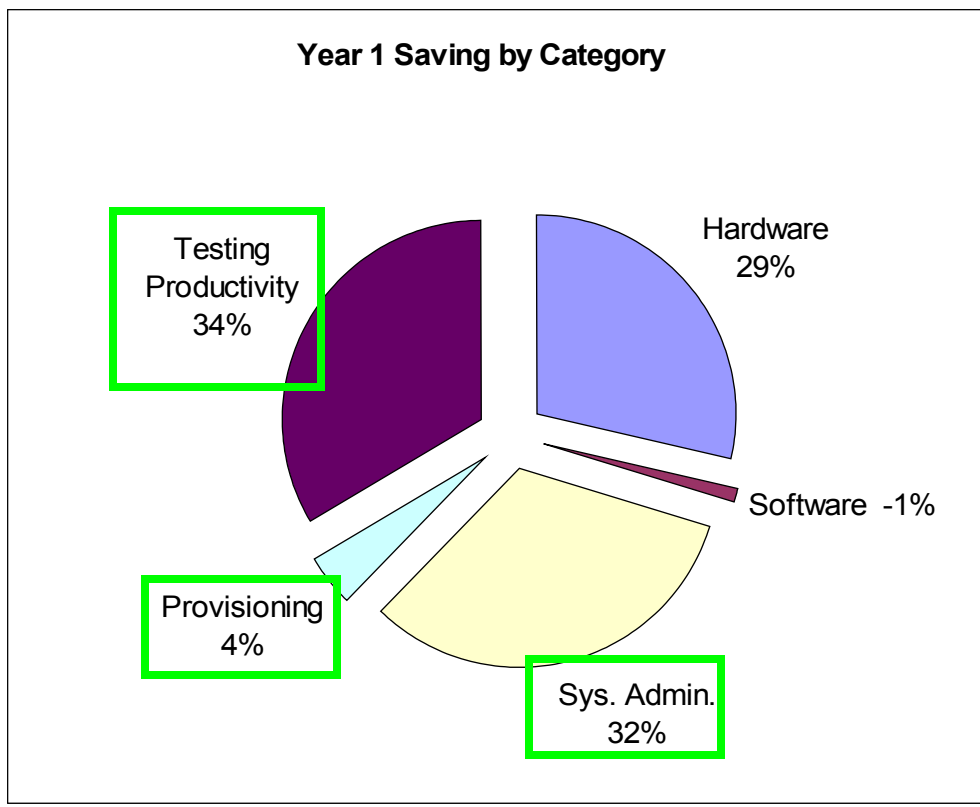
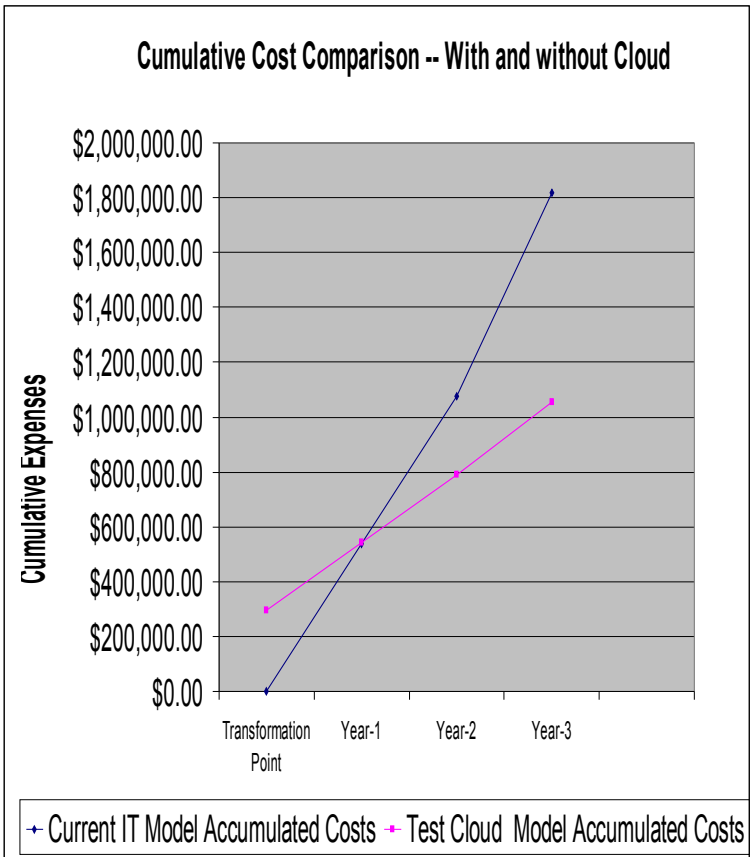


= Service Management driven savings

ROI projections from IBM Research Study 2009

# ROI analysis example- Manufacturing (SO account - small)

Payback Period (months)	→ 12.18
Total Initial Investment for Test Cloud	\$294,583.33
Net Present Value (NPV)	\$669,678.84
Estimated ROI over 3 years	227.33%
Estimated avg. annual ROI	→ 75.78%



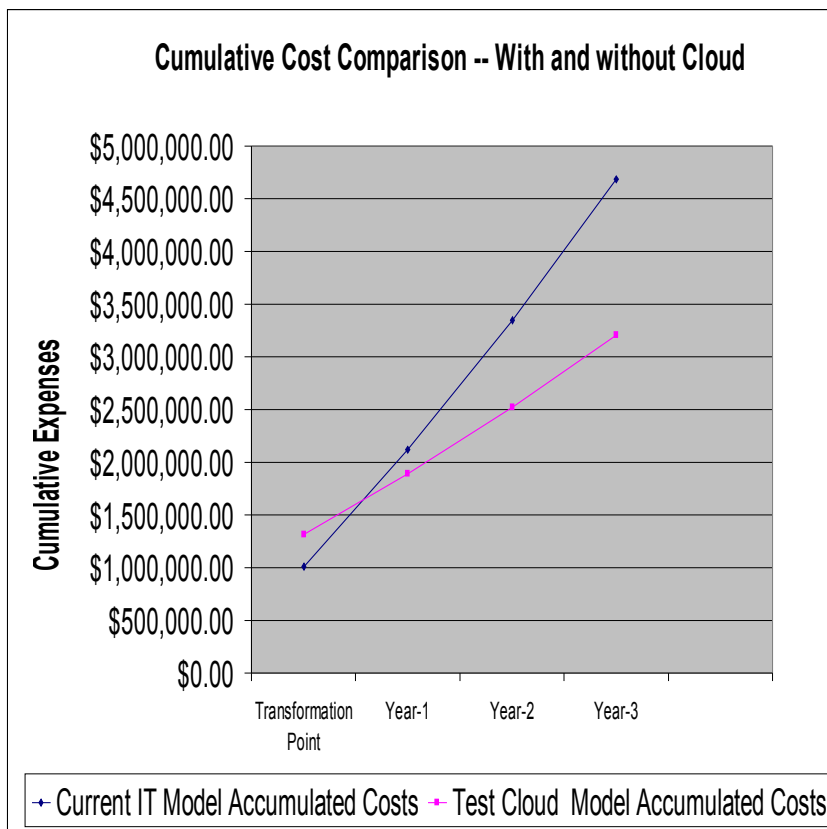
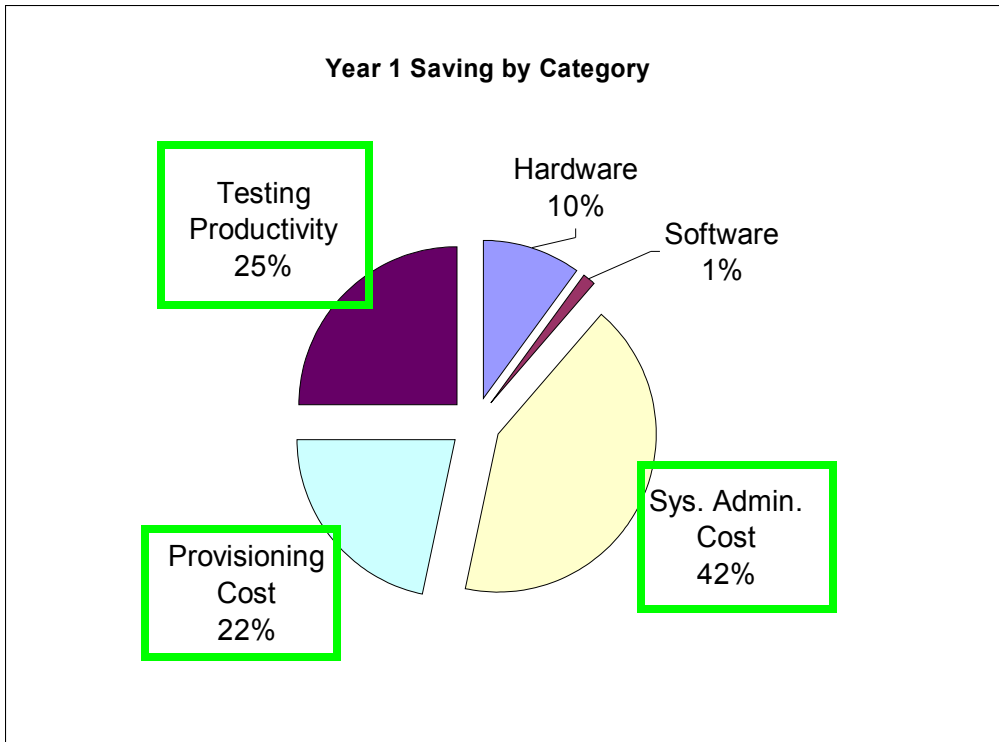
= Service Management driven savings

ROI projections from IBM Research Study 2009



# ROI analysis example- Banking (medium # of servers)

Payback Period (months)	→ 6.82
Total Initial Investment for Test Cloud	\$302,958.33
Net Present Value (NPV)	\$935,880.13
Estimated ROI over 3 years	308.91%
Estimated avg. annual ROI	→ 102.97%



= Service Management driven savings

ROI projections from IBM Research Study 2009



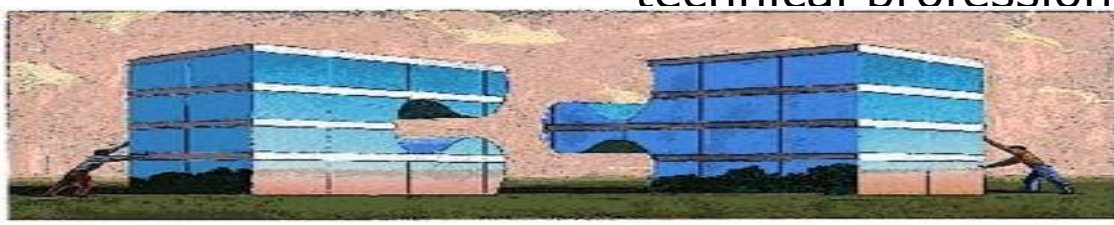
# Tivoli Service Automation Mgr-IBM Deployment service

## Benefits:

- Minimize installation costs by properly planning and executing your rollout
- Learn from our years of experience and proven recommended practices
- Hands-on experience with Tivoli Service Automation Manager environment
- Create a template environment that can be used as a model for a rollout

## Deliverables:

- Tivoli Service Automation Manager Architecture and Solution Design
- Installation and configuration of the product in a pre-production environment
- Configuration and integration scripts and code
- Deployment Summary
- Demonstration of features and key use cases
- Basic skills instruction for customer technical professionals





# Introducing IBM Service Delivery Manager (ISDM)

# Multiple entry points for automating the management of virtual environments and building a dynamic service delivery model

## IBM Tivoli Service Automation

*Solution to support user-driven service requests and automated resource deployment*

## IBM Service Delivery Manager



*Pre-configured service management solution optimized for managing virtual environments and cloud deployments*

## IBM CloudBurst

*Integrated hardware, software and service solution optimized for cloud computing*

Self-service user interface for service requests for improved responsiveness and efficiency

Automated IT resource deployment for efficient operations and to address fluctuating business requirements

Interoperable with existing hardware to leverage available resources and previous investment

Pre-integrated solution, delivered as virtual images for faster installation and time to value

Performance monitoring for ongoing managing of the service

Energy Management for tracking and optimizing operational costs

Usage and accounting tracking for chargeback capabilities

Managed-to environment ready for high availability

Managed-from and managed-to environment to accelerate cloud computing pilots

Bundled with hardware and QuickStart services for rapid time to value



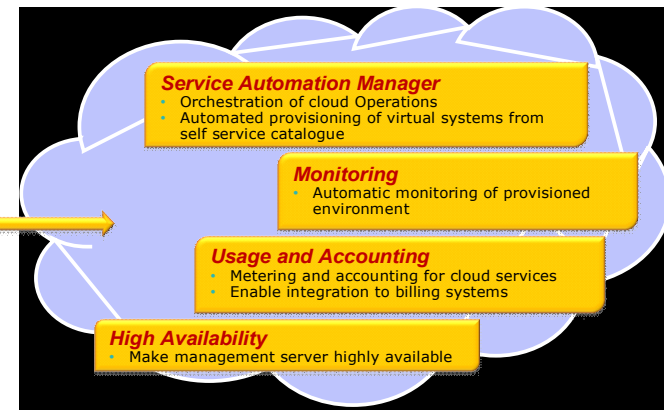
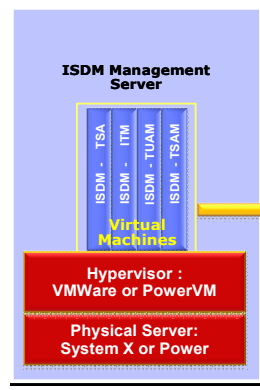
# IBM Service Delivery Manager

Management appliance delivered as virtual images that includes

- Pre-installed and configured service delivery platform for private clouds
  - TSAM, ITUAM, ITM, TSA; IBM Systems Director and VMControl
- Solution deployment procedure that deploys the images on the customer provided hypervisor and completes the image configuration according to customer environment requirements

## Market Benefits of ISDM

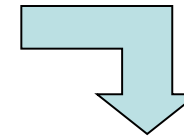
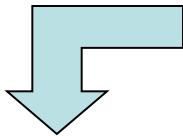
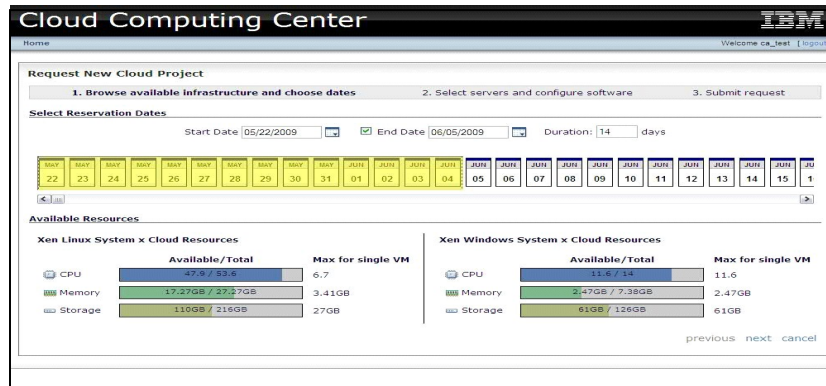
- Integrated Cloud solution that allows clients to leverage existing hardware while achieving both rapid Time to Value and strong return on investment.
  - Reduces the amount of integration work required to implement a cloud by offering a pre-bundled and integrated service management software stack
  - Reduces the risk associated with integration and accelerates a partner's ability to deliver private cloud computing capabilities to specific vertical markets.





# IBM Service Delivery Manager Integrated Service Management

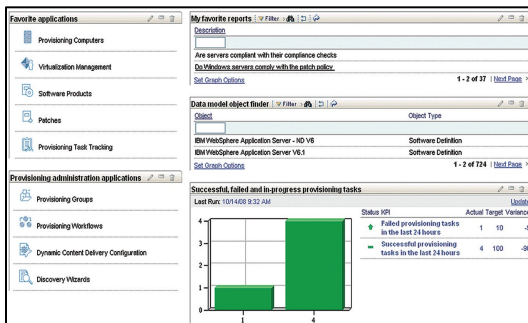
## For Locating and Requesting Services



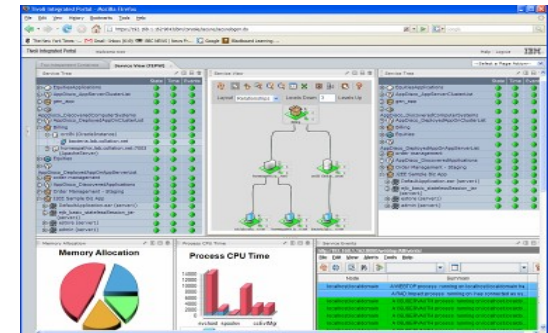
### Deploying Cloud Services

### Secure User Centric Self-Service Portal, Automation Engine and Catalog

### Managing Cloud Services



### Automated Provisioning and Image Management



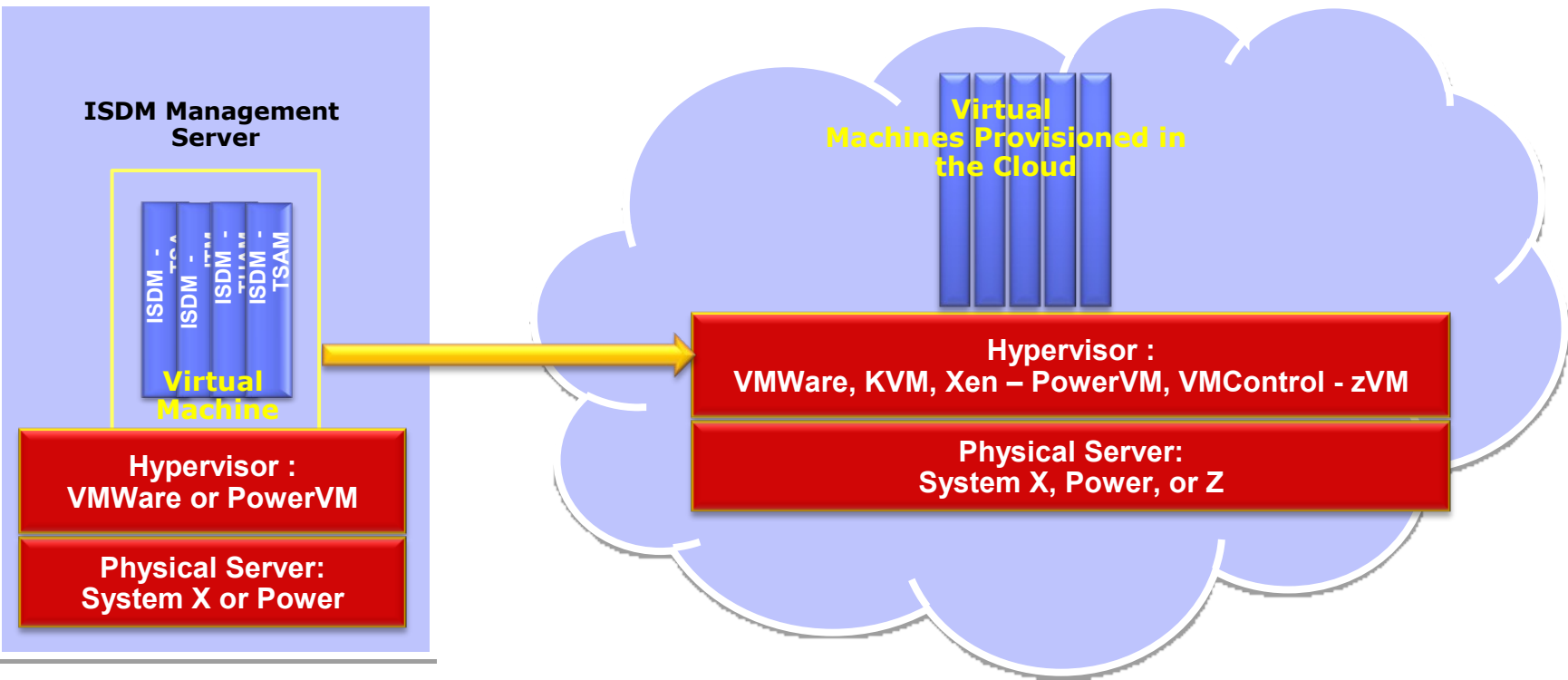
### Monitoring and Metering



# ISDM: delivered as pre-integrated virtual images

## “Manage From” Environment

## “Managed To” Environment



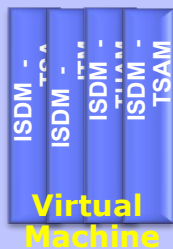


# ISDM: delivered as pre-integrated virtual images

## “Manage From” Environment

## “Managed To” Environment

ISDM Management Server



Hypervisor :  
VMWare or PowerVM

Physical Server:  
System X or Power

### **Service Automation Manager**

- Orchestration of cloud Operations
- Automated provisioning of virtual systems from self service catalogue

### **Monitoring**

- Automatic monitoring of provisioned environment

### **Usage and Accounting**

- Metering and accounting for cloud services
- Enable integration to billing systems

### **High Availability**

- Ensure management server is highly available



# Service Management Cloud Infrastructure Offerings

Three approaches to give our customers consumability options and multiple entry points for a common cloud computing platform

## *A la Carte Service Mgmt*

### Customizable

- Individual software offerings, fully customizable to the environment
- Could begin with TSAM, or could require other SM capabilities for cloud, such as security or storage mgmt.
- Designed for customized datacenter automation. Currently utilized by external customers, service providers, and internal customers such as IBM public clouds.

## *IBM Service Delivery Mgr*

### Flexible HW Configurations w/Fast Time to Value

- Integrated software-only service management offering for cloud computing.
- Same basic SW function as CloudBurst
- Delivered as a set of virtual machines for simplified deployment and faster time to value
- Allows flexibility of the HW platform, with a pre-determined set of service management tasks and workflows

## *IBM CloudBurst*

- Fixed Configurations, Faster Time to Value
- Pre-Integrated HW/SW/Services release in a pre-determined configurations
- Includes HW for System x, or PowerSystems, STG SW and Tivoli Service Management Software, GTS quickstart services
- Self-contained management designed for cloud computing pilots or fixed size environments
- Designed for quick deployment of limited cloud use cases

Customizable



Rapid Time to Value

# Automation Solutions Overview

**IT Service Delivery for Cloud: core plus additional service management**  
 (incl. Usage & Accounting, Energy Mgmt, HA)

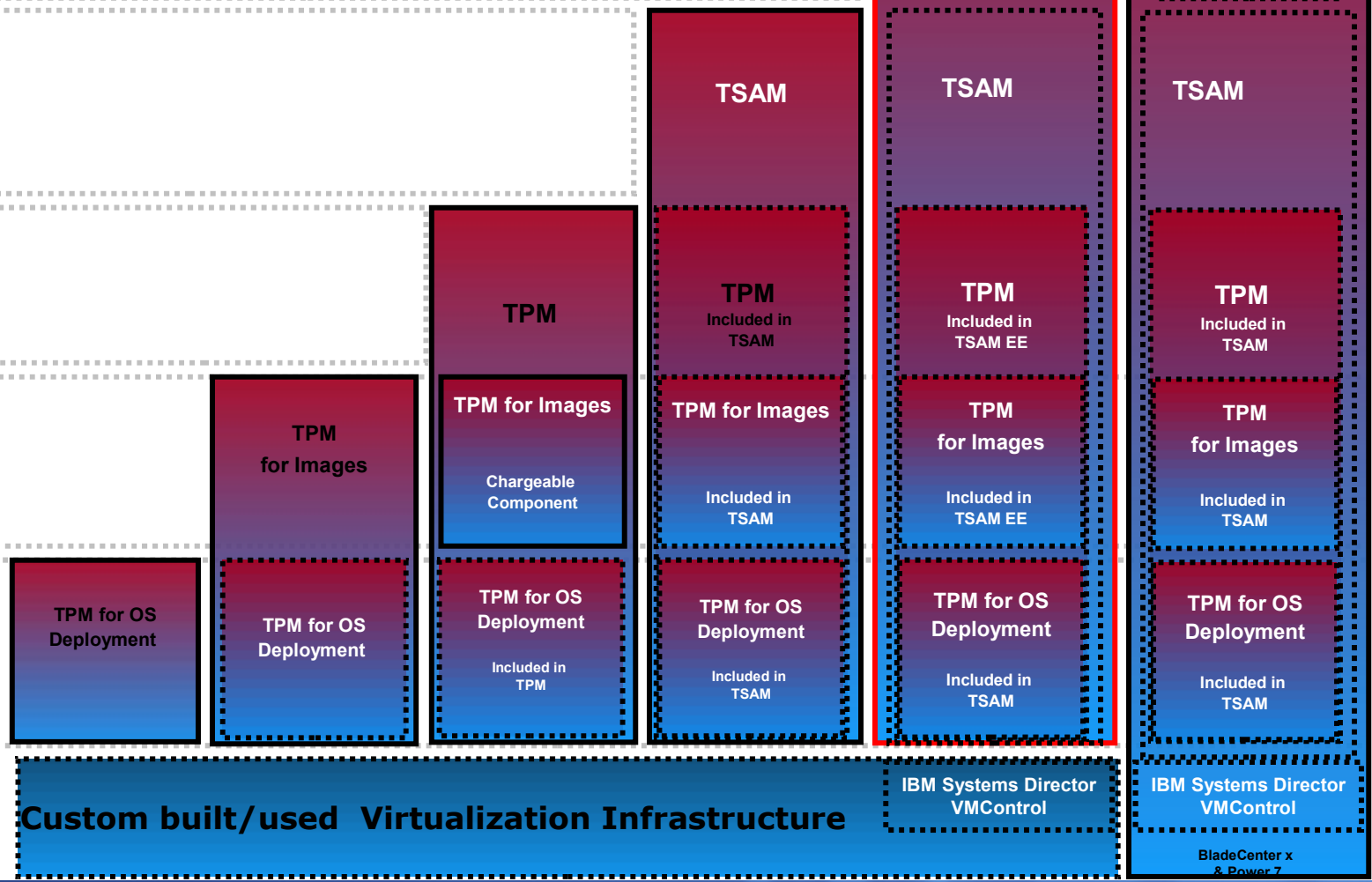
**IT Service Delivery for Cloud: core components**  
 (request, deliver, and manage services)

**Resource Prov & Config Mgmt**  
 (Incl. Composite image mgmt and federated image repository)

**Image Management**  
 (discover, deploy, convert, maintain)

**Heterogeneous OS Deployment and Management**

HW



**Custom built/used Virtualization Infrastructure**

IBM Systems Director VMControl

IBM Systems Director VMControl

BladeCenter x & Power 7



# Thank You!