



Rethink IT. Reinvent Business.

Cloud Computing

Build a low-touch, highly scalable cloud with
IBM SmartCloud Provisioning

Cloud computing is fundamental to changing the economics of business infrastructures and speeding the delivery of innovative products & services

Improve security and compliance control posture

Embrace new business opportunities while maintaining control and mitigating risk.



Improve speed and dexterity

Speed the delivery of new offerings and services by creating new models of self-service and deployment.

Deliver IT without boundaries

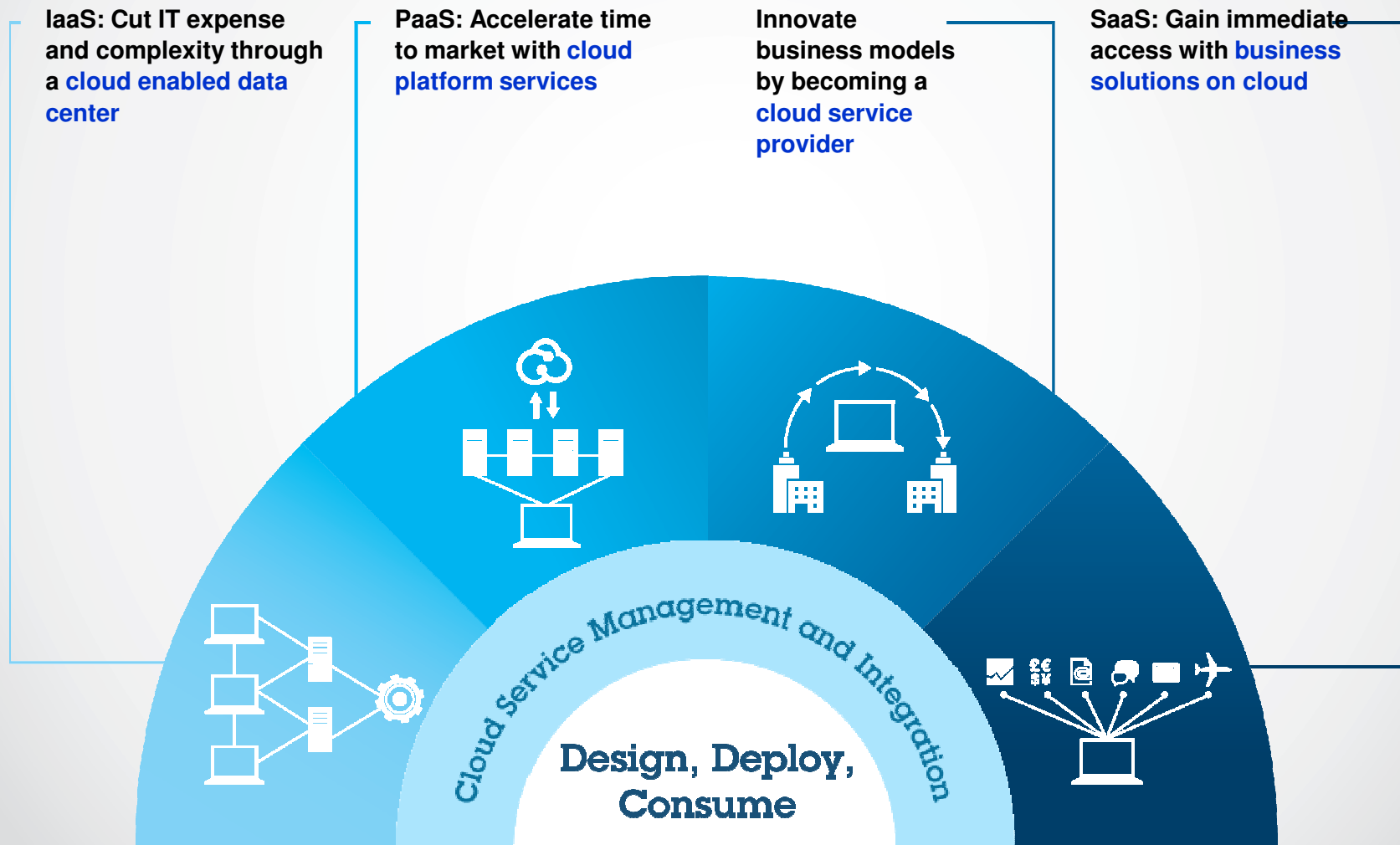
Implement new systems and management processes that simplify access to information in order to deliver better business outcomes.



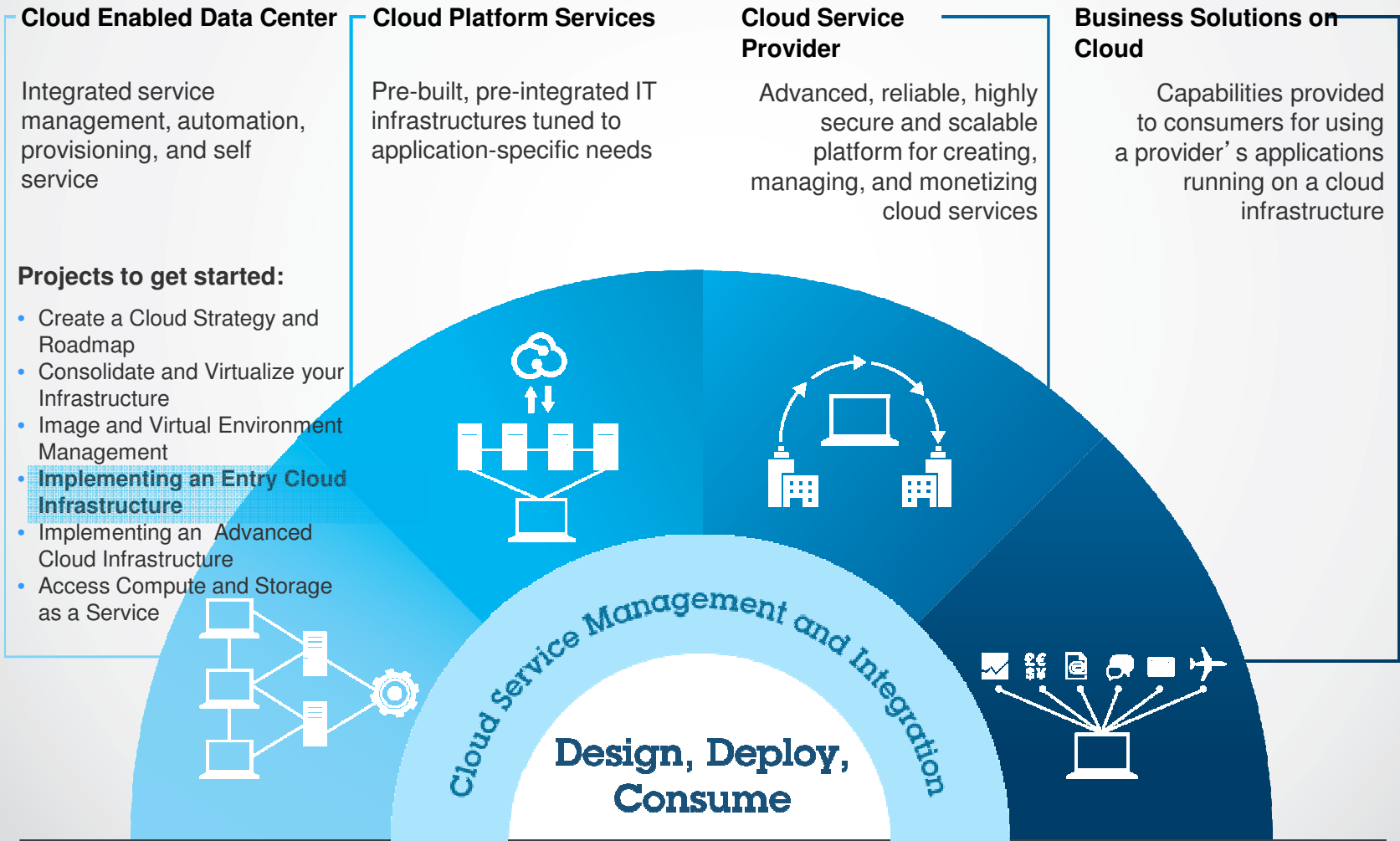
Create new business value

Empower internal and external communities to define and create new offerings and services.

Adoption patterns are emerging for successfully beginning and progressing cloud initiatives



IBM delivers prescriptive, repeatable cloud solutions for our clients' most pressing priorities.

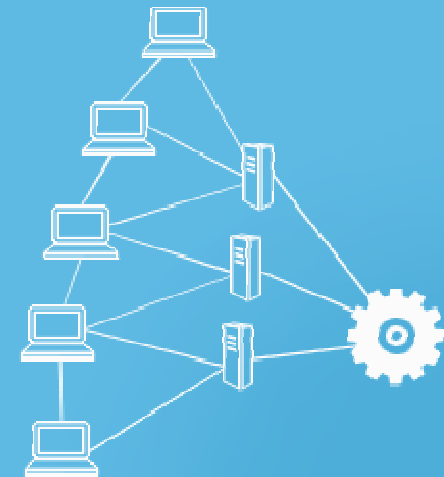


Build a low-touch, highly scalable cloud with IBM SmartCloud Provisioning

IBM SmartCloud Provisioning is a true Infrastructure-as-a-Service cloud, reducing cost and providing a highly scalable, rapid-deployment environment with near-zero downtime and automated recovery across heterogeneous platforms.

Key benefits:

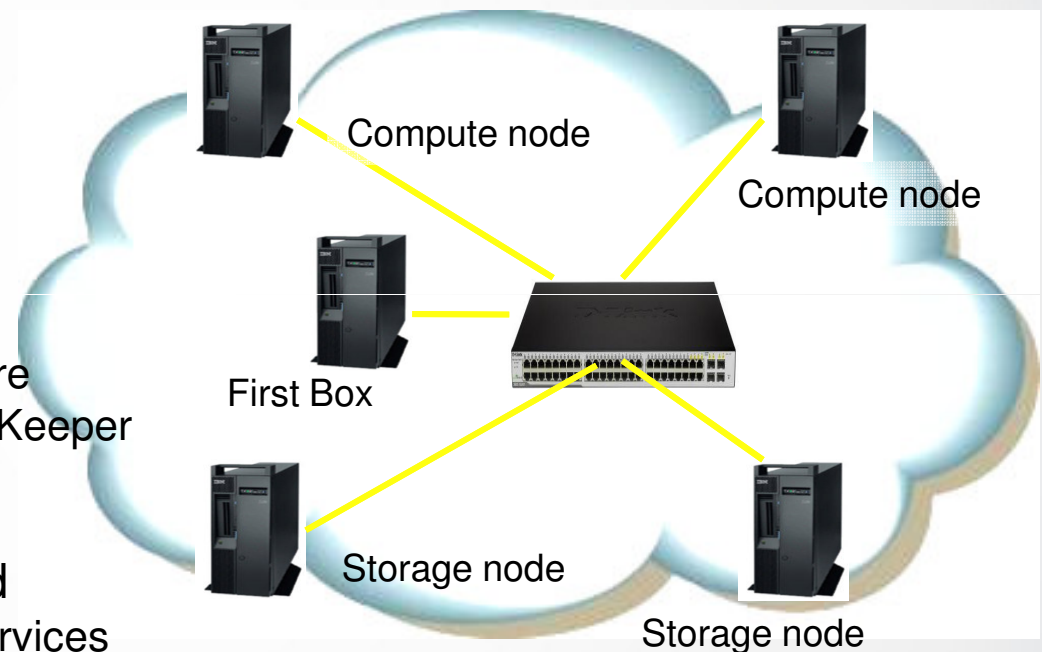
- **Rapid scalable deployment** designed to meet business growth with near-instant deployment of 100s of virtual machines
- **Reliable, non-stop cloud** capable of automatically tolerating and recovering from software and hardware failures
- **Save IT labor resources at scale** by enabling self-service request and highly automated operations
- **Reduce complexity** through ease of use and improve time to value



Quickly Get Started with SmartCloud Provisioning

- Quickly stand up a cloud
 - Start small and scale based on need
 - No additional pre-reqs such as databases, app servers, messaging middleware
 - Freedom of choice for hypervisors
 - Avoid expensive vendor lock in
 - VMWare ESX, KVM, Xen
- Highly cost effective solution
 - Requires no additional hypervisor management tools
 - Requires no HA hardware or software
 - Based on Apache Hadoop and ZooKeeper Technology
- Rich set of interfaces into the cloud
 - Web Interface, scripting and web services
 - All function can be driven by a user or by scripts for complete automation

IBM SmartCloud Provisioning



- Out-of-the-box and running in less than 4 hours
- Get started with only 4 servers

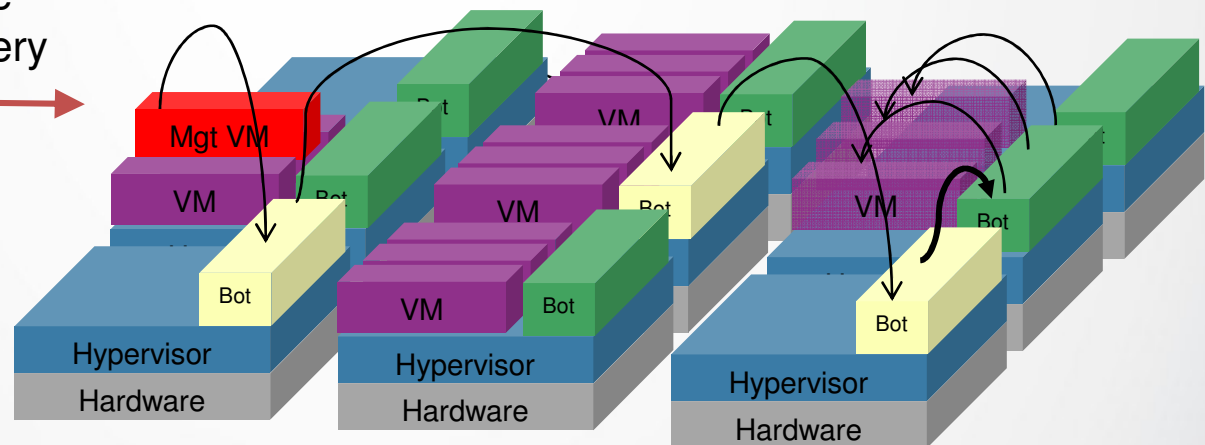
Provides Unparalleled Scalability, Speed and Fault Tolerance

IBMSmartCloud Provisioning

- It's **Fast**
 - Can start 100 VMs in under 3 mins
 - Can start a single VM and load OS in under 10 seconds
 - Can go from bare metal to ready for work in under 5 minutes
- It **Scales** up to and beyond 50,000 VMs in an hour (50 nodes)
 - Add capacity by simply plugging in a blade or server
 - Writes only the data you change
 - Peer-peer architecture to avoid traditional bottlenecks
- It's **Fault-Tolerant**
 - “Live Update” capability to patch or upgrade the Cloud
 - No single point of failure
 - Automatic failure recovery



Requested VMs will be up and running under a minute using standard HW



UI, Command line, Web Service to select Images

Choose from a list of pre-configured, pre-tested images

IBM Service Agility Accelerator for Cloud 1.1.0

Version: 1.1.0.218 Build: 201108300513

Home Documentation Resources

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Service Region: Zodiac Cloud Access ID: u23152

Master Images Instances Addresses Volumes Key Pairs

Launch Delete Image Refresh Show Detail View:

Input keyword here Search

Selection	Master Image ID	Description	Architecture	Platform	Status	Size	Format	Disk Driver
<input type="radio"/>	img-03254	RHEL6 with topo activation	x86_64	linux		10 GB	raw	ide
<input checked="" type="radio"/>	img-37139	bugzilla on RHEL6	x86_64	linux		10 GB	raw	ide
<input type="radio"/>	centos55-i386	Centos 5.5 i386 official standard support virtio	i386	linux		20 GB	raw	ide
<input type="radio"/>	centos55-x64	CentOS 5.5 x86_64 size 10G official standard	x86_64	linux		10 GB	raw	ide
<input type="radio"/>	db2kvm	RHEL5.0-32bit-DB2 ES 9.5	i386	linux		6.84 GB	raw	ide
<input type="radio"/>	db2wsekvm	RHEL5.0-32bit-DB2 WSE 9.7	i386	linux		6.5 GB	raw	ide
<input type="radio"/>	fteckvm	RHEL5.0-32bit-FTE 7.0.2 Client	i386	linux		6.84 GB	raw	ide
<input type="radio"/>	fteskvm	RHEL5.0-32bit-FTE 7.0.2 Server	i386	linux		6.84 GB	raw	ide
<input type="radio"/>	ihskvm	RHEL5.0-32bit-IHS 6.1	i386	linux		6.84 GB	raw	ide
<input type="radio"/>	img-00387kvm	RHEL5.5-32bit-WebSphere ND 8 Beta (captured by svt_tivoli)	i386	linux		10 GB	raw	ide
<input type="radio"/>	img-00856kvm	WinXP-32bit-PCOM 5.7 & SAP client SAP640 (captured by svt_tivoli)	i386	windows		20 GB	raw	ide
<input type="radio"/>	img-05624	TT73_SOANET_PMR	i386	windows		30 GB	raw	ide
<input type="radio"/>	img-05898kvm	Win2K3R2-32bit-JBoss 4.2.3 (captured by svt_tivoli)	i386	windows		20 GB	raw	ide
<input type="radio"/>	img-10329	ITM622fp2_SOA7113_for_WSRRIntegration_v3	i386	linux		9 GB	raw	ide
<input type="radio"/>	img-11434	Ubuntu10.4_i386_10G_bxy	i386	linux		10 GB	raw	ide
<input type="radio"/>	img-11518	TupliTrader_MP/MC/DB_NoDC1	i386	linux		6.84 GB	raw	ide

1 - 25 of 151 items 10 | 25 | 50 | 100 | All

UI, Command Line, Web Service to Create Virtual Servers

Launch Instance of master image:img-03254

Master Image ID:

* Number of instances:

Key Name:

* Instance Type: xSmall Small Medium Large xLarge

User Data:

Instance Tag:

Persistent Instance:

Choose the number of virtual servers you need and a simple server configuration to avoid lots of complicated settings (CPU allocations, memory settings, etc.)

UI, Command Line, Web Service to Attach Storage

Optionally, add one or more storage volumes to your virtual server

IBM Service Agility Accelerator for Cloud 1.1.0

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Master Images Instances Addresses **Volumes** Key Pairs Service Region: VM Services Access ID: u21631

Create Volume Delete More Actions Refresh Show Detail View: Input keyword here Search

Volume ID	Capacity	Status	Instance ID	Disk Identifier	Creation Time	Tag
No filter applied						
vol-09980-u21631	1 GB	●	hyper1.tivx043.12038.u216		8/19/11 2:28 PM	
vol-41841-u21631	1 GB	●			8/19/11 3:05 PM	mytest

UI, Command Line, Web Service to Bind IP Addresses

Optionally, add "public" IP addresses to your virtual servers so that other machines can reach them easily

The screenshot shows the IBM Service Agility Accelerator for Cloud 1.1.0 web interface. The top navigation bar includes 'Home', 'Documentation', and 'Resources'. The user is logged in as 'yuyue@cn.ibm.com'. The main navigation tabs are 'Master Images', 'Instances', 'Addresses', 'Volumes', and 'Key Pairs'. The 'Addresses' tab is selected. Below the tabs, there are buttons for 'Allocate New Address', 'Release Address', 'More Actions', and 'Refresh'. A search bar with the placeholder 'Input keyword here' and a 'Search' button is also present. The main content area displays a table of IP addresses.

Address	Status	Instance ID	Tag
172.16.8.2	●		hill
172.16.8.3	●		hill

Case Study: Leveraging IBM SmartCloud Provisioning throughout the Development Lifecycle

Business Challenge

Hardware constraints

- Significant number of machines required to support development life-cycle
- Low HW utilization rates
- Forced to use outdated HW

Time constraints

- Required time to setup a complex topologies
- Significant time spent on setup rather than testing

Skills requirements

- Training engineers to setup complex software stack

Solution

Leverage SmartCloud Provisioning to rapidly stand up development and test environments

- Currently using SmartCloud in 28 development and test projects in Tivoli
- Reduced setup time from 2 hours to 5 minutes
- Returned 356 old physical machines to surplus
- Enables more time to be spent validating software instead of setting up environments

