How to become cloud enabled?
By using IBM SmartCloud Provisioning.

IBM cloud-based platform

IBM SmartCloud Solutions

Rethink IT and reinvent business
Optimized Software Solutions
Provisioning
Extending Capabilities
Orchestrator upgrade path
Customer Offerings
Benefits

IBM SmartCloud Solutions

Rethink IT and reinvent business

IBM SmartCloud Solutions

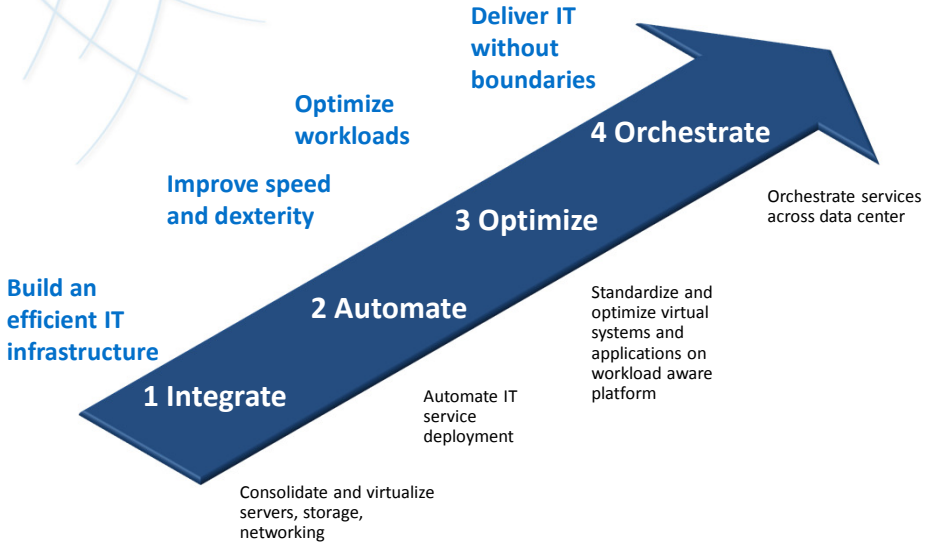
The time has come to rethink IT and reinvent business with IBM SmartCloud

Ask the fundamental questions:

- Is your organization achieving the levels of innovation required to compete in today's environment?
- Is your organization able to nimbly put lucrative ideas into action?
- Is your organization continually reinventing customer relationships?
- Are you adapting to market changes as fast as your competitors?

IBM SmartCloud Solutions

Organisations are now moving beyond virtualization to higher value stages of cloud



IBM SmartCloud Solutions

Optimized software solutions

IBM SmartCloud Solutions

Introducing SmartCloud

IBM SmartCloud is our family of enterprise-class cloud computing technologies and services for securely building and using private, public and hybrid clouds.

IBM Tivoli. software

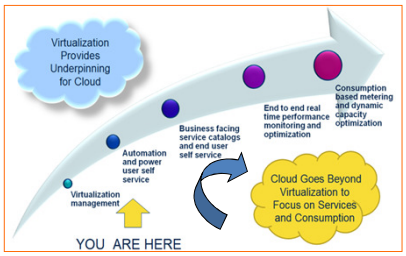
IBM SmartCloud Solutions

Companies need an affordable entry point for cloud

Organizations need a low-cost, low-risk entry point to cloud computing technology with compelling features that achieves their business goals.

Customer goals:

- Provide **agile service delivery** that caters to changing business needs.
- We know virtualization helps reduce capital expense but how do I **control my operational cost?**
- Need to increase the performance, utilization, reliability and scalability of IT resources while **reducing IT complexity**
- Ability to **expand capabilities**



VISIBILITY
See services in real time & better predict business outcomes

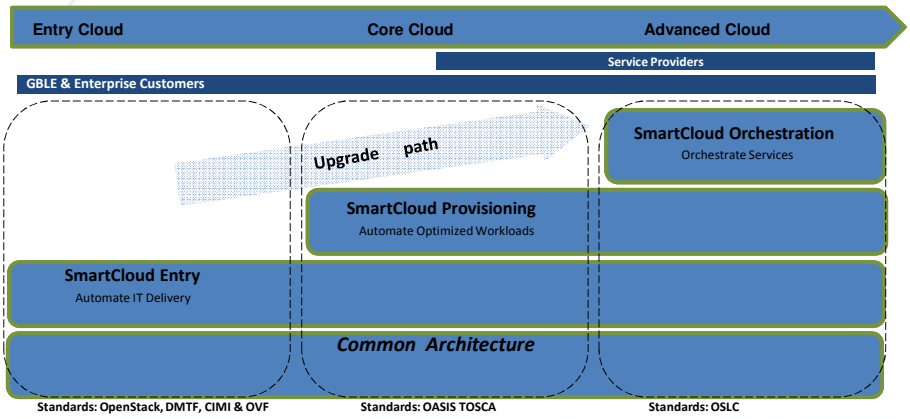
CONTROL
Better manage assets, service & compliance.

AUTOMATION
Achieve greater efficiency and service quality

IBM SmartCloud Solutions

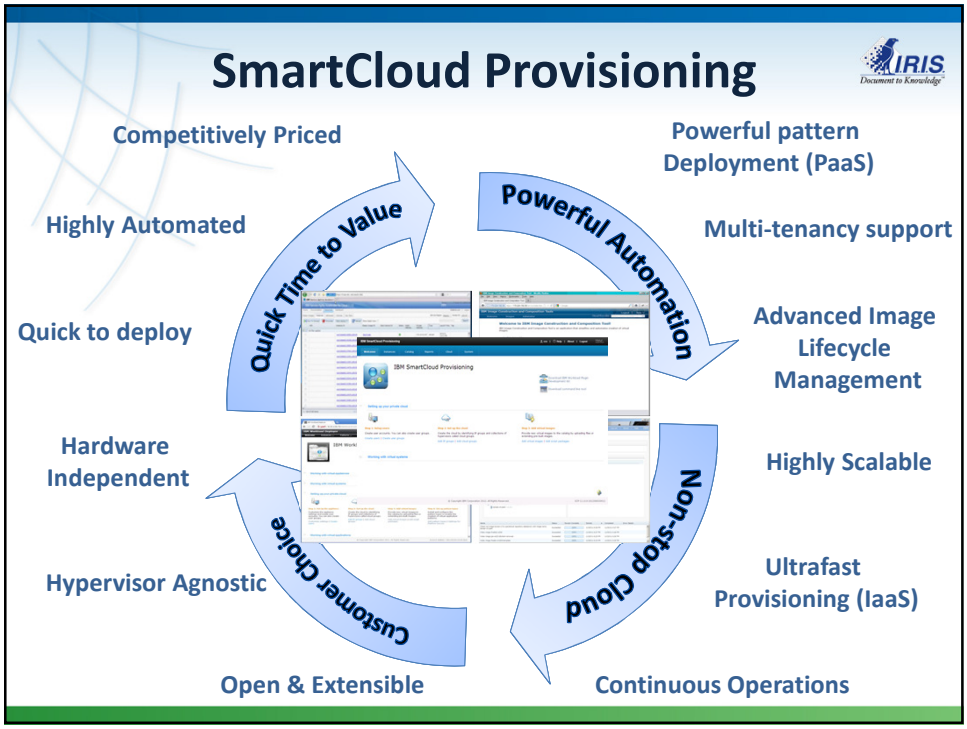
IBM's common architecture for cloud

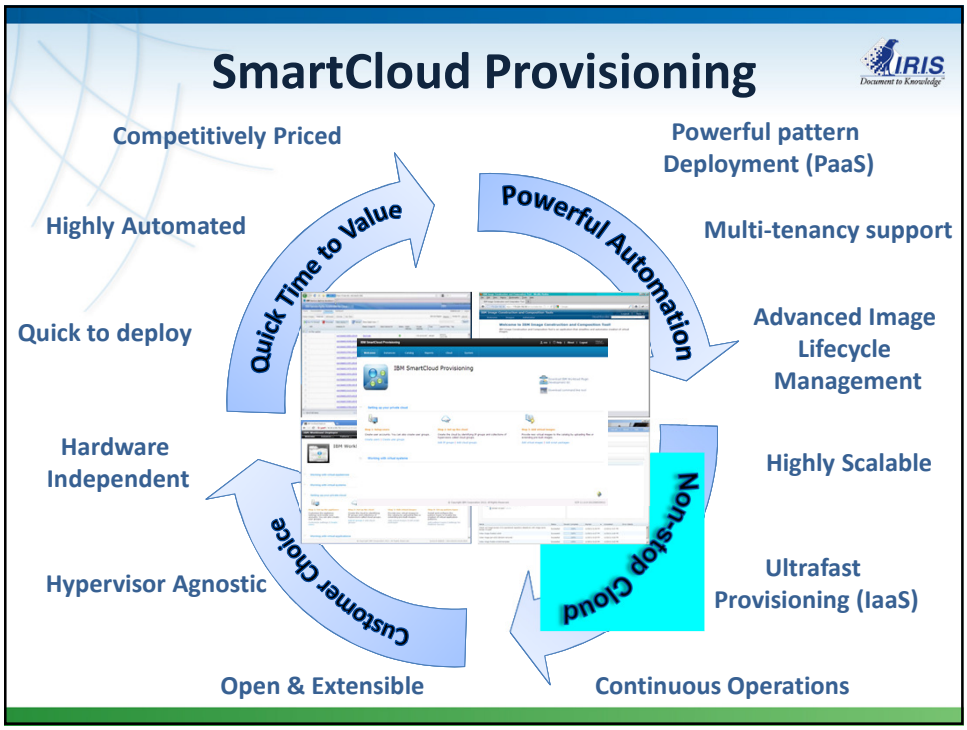
Creation of **common, standards based architecture** to avoid vendor lock in
Entry points and packages are **modular** serving different markets, buyers, and price points
Platform that "stacks" with capabilities that build from the Entry offering
Clean upgrade paths with **progression** to advance along the maturity curve



IBM SmartCloud Solutions

SmartCloud Provisioning (SCP)


SmartCloud Provisioning
Competitively Priced
Powerful pattern Deployment (PaaS)
Highly Automated
Multi-tenancy support
Quick to deploy
Advanced Image Lifecycle Management
Hardware Independent
Highly Scalable
Hypervisor Agnostic
Ultrafast Provisioning (IaaS)
Open & Extensible
Continuous Operations
Quick Time to Value
Powerful Automation
Non-stop Cloud
Customer Choice


SmartCloud Provisioning
Competitively Priced
Powerful pattern Deployment (PaaS)
Highly Automated
Multi-tenancy support
Quick to deploy
Advanced Image Lifecycle Management
Hardware Independent
Highly Scalable
Hypervisor Agnostic
Ultrafast Provisioning (IaaS)
Open & Extensible
Continuous Operations
Quick Time to Value
Powerful Automation
Non-stop Cloud
Customer Choice

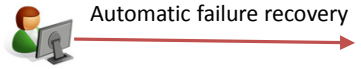
IBM SmartCloud Solutions

Provides unparalleled scalability, speed and fault tolerance

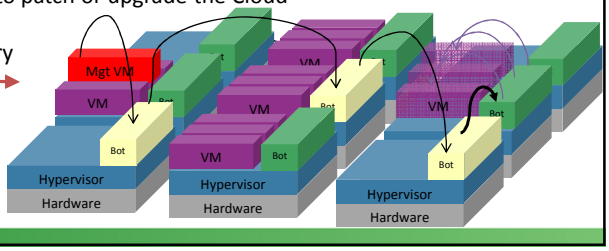
It's **Fast**
- Can start 100 VMs in under 3 minutes
- Can start a single VM and load OS in under 10 seconds
- Can go from bare metal to ready for work in under 5 minutes

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



SmartCloud Provisioning

Competitively Priced

Powerful pattern Deployment (PaaS)

Highly Automated

Multi-tenancy support

Quick to deploy

Advanced Image Lifecycle Management

Hardware Independent

Highly Scalable

Hypervisor Agnostic

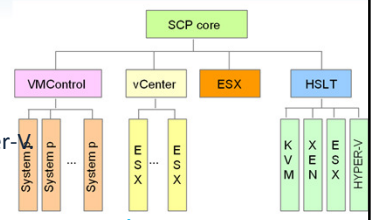
Ultrafast Provisioning (IaaS)

Open & Extensible

Continuous Operations

SmartCloud Provisioning

Customer Choice



Hypervisor Agnostic
YOUR choice of hypervisor
Managed or direct to hypervisor.
High scale low touch support for KVM, Xen, ESX, Hyper-V.
Managed hypervisor support for vCenter, VMControl.
No lock in – easy to move between hypervisors.
(demo shared image 3 min & demo hypervisor provisioning 4 min)

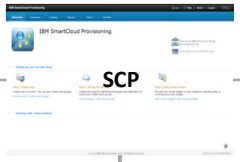
Hardware Independent
Supports any x86 hardware with VT.
Manage PowerVM systems through VMControl.
Works with IBM's new PureFlex systems.
Simple to integrate with existing storage systems. (storage independent)

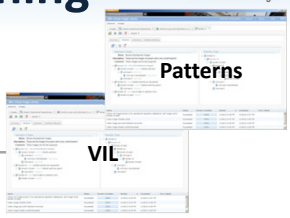
Open and Extensible
Open source based (HBase, ZooKeeper), small footprint.
HSLT component being shared with OpenStack community.
Easy to integrate with Web Services layer, REST APIs,…

"IBM Joins OpenStack as a Founding Member"
- April 2012

SmartCloud Provisioning

SCP – Supported Hypervisors



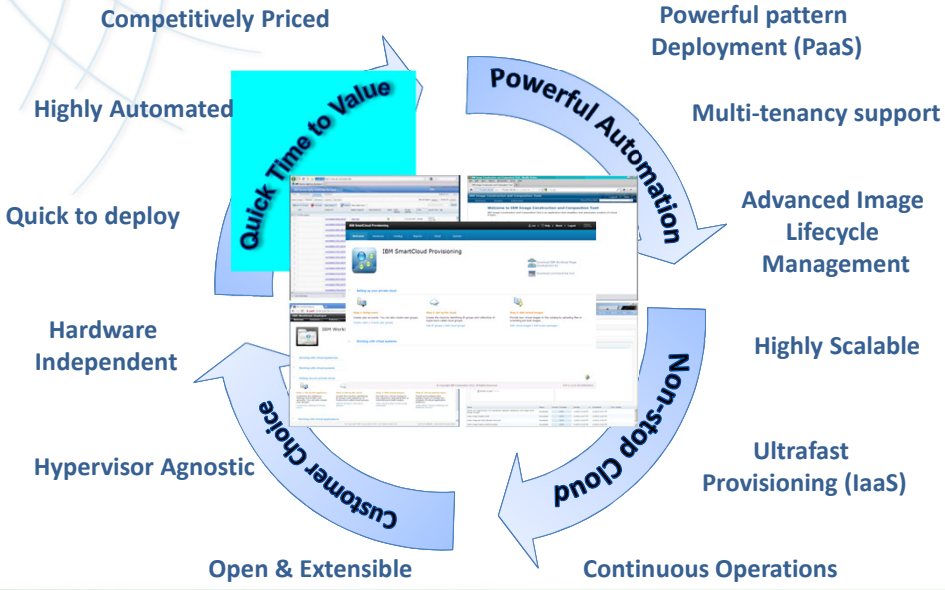


VMcontrol | VMware vCenter | VMware ESX | HSLT | Open Stack

Power VM | Power VM | … | Power VM | ESX | ESX | … | ESX | KVM | Xen | Hyper-V | ESX

PowerVM vmware vmware KVM Xen Microsoft Hyper-V vmware openstack

SmartCloud Provisioning



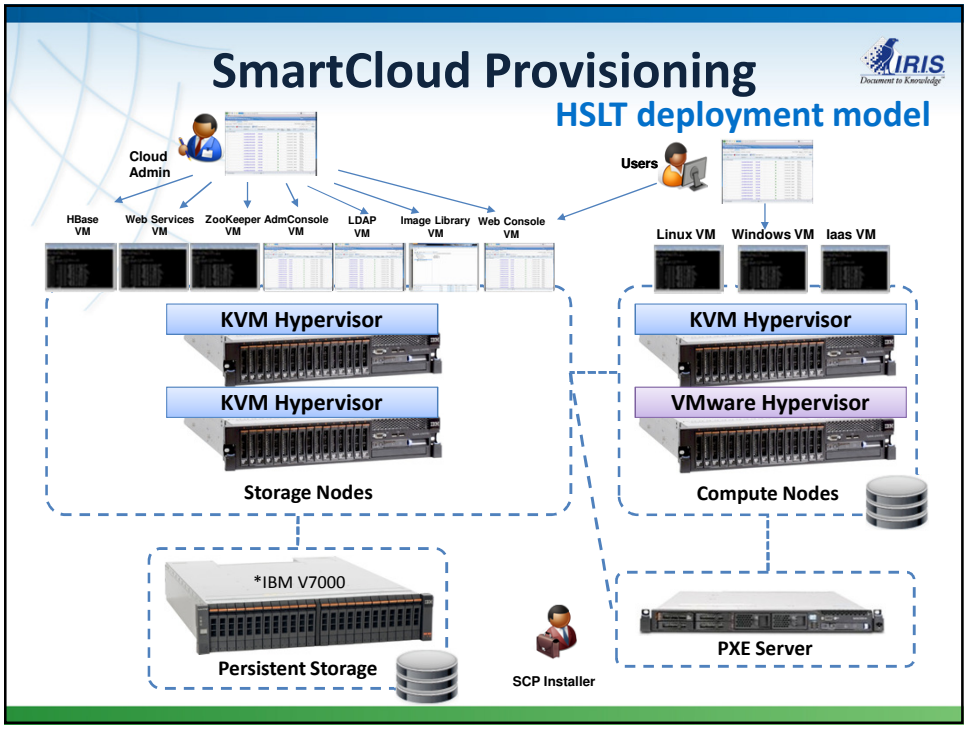
SmartCloud Provisioning

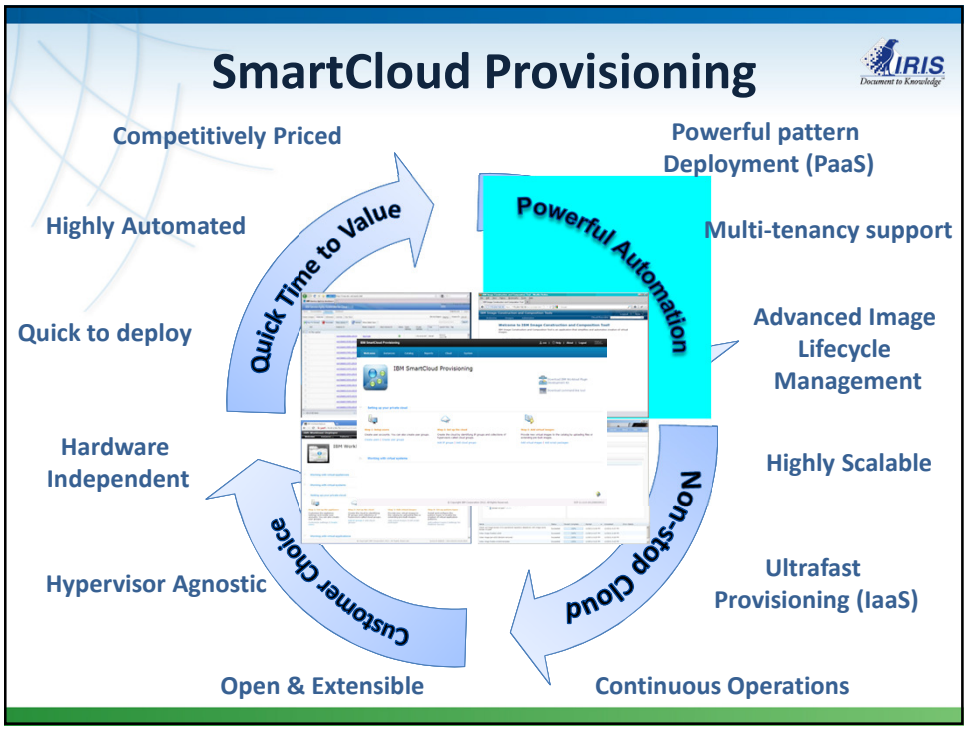
Quick Time to Value

Pricing
Cost competitive pricing against other Cloud provisioning solutions.
Special MSP pricing models, ASL licensing, perpetual license or monthly rental.
Pricing is possible in ASL (datacenter or hosting) mode

Highly Automated – Optimise your staff costs
Requires less administrators to manage the environment.
Designed for low-touch operations and administration – reduces manual effort.
Highly automated, self-healing, and instant recovery of the cloud management.

Easy to Deploy – Time to Value
Install a PXE Boot Server (first box) and a network switch
Hook in the network 4 servers (2 storage nodes and 2 compute nodes)
Management Software installs itself as a cluster over the nodes (2-3 hours)
Extends automatically (from bare metal to cloud node in less than 6 min)


SmartCloud Provisioning
HSLT deployment model
Cloud Admin
Users
HBase VM
Web Services VM
ZooKeeper VM
AdmConsole VM
LDAP VM
Image Library VM
Web Console VM
Linux VM
Windows VM
Iaas VM
KVM Hypervisor
KVM Hypervisor
Storage Nodes
KVM Hypervisor
VMware Hypervisor
Compute Nodes
*IBM V7000
Persistent Storage
SCP Installer
PXE Server


SmartCloud Provisioning
Competitively Priced
Powerful pattern Deployment (PaaS)
Highly Automated
Multi-tenancy support
Quick to deploy
Advanced Image Lifecycle Management
Hardware Independent
Highly Scalable
Hypervisor Agnostic
Ultrafast Provisioning (IaaS)
Open & Extensible
Continuous Operations
Quick Time to Value
Powerful Automation
Non-stop Cloud
Customer Choice

SmartCloud Provisioning

Powerful Cloud Automation

Powerful Pattern Deployment
Powerful drag-and-drop UI to design e-business patterns.
Deployment for complex PaaS environments in just a few clicks.
(**Pattern Deployment demo 5 min**)

Multi-Tenancy Support
MSP & CSP ready with network and presentation separation.
Service catalog for IaaS and PaaS offerings.

Advanced Lifecycle Image Management
Management capabilities to design, build and manage image sprawl.
Automated image indexing supporting file/byte comparisons within images.
Image construction and composition tool (ICCT) to build standardised images.

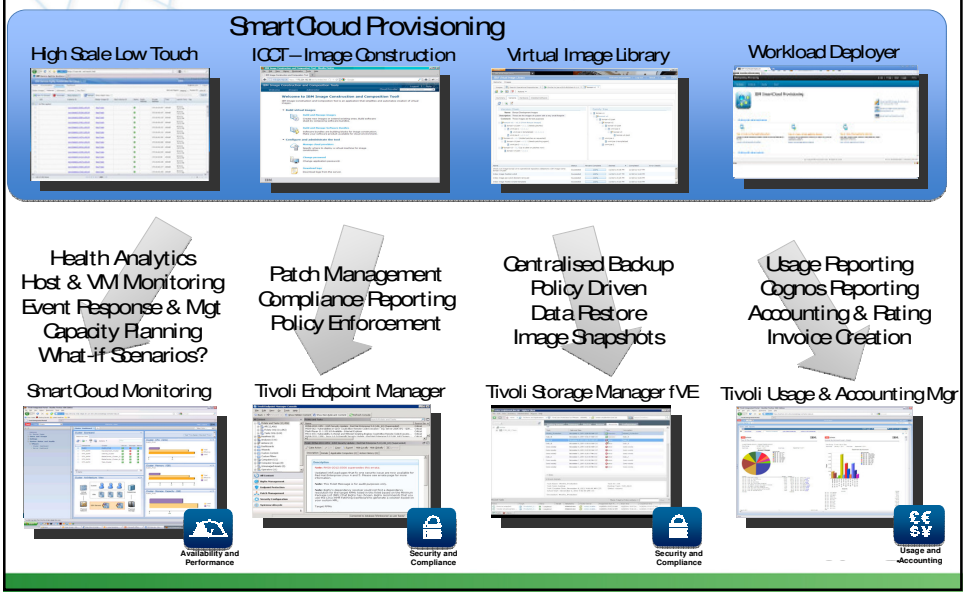
Easy to Migrate & On-board
Can manage existing VMware deployments by managing through vCenter. (**VM take over demo ppt**)

IBM SmartCloud Solutions

SmartCloud Extending Capabilities

SmartCloud Provisioning

Extending the cloud capabilities beyond SCP

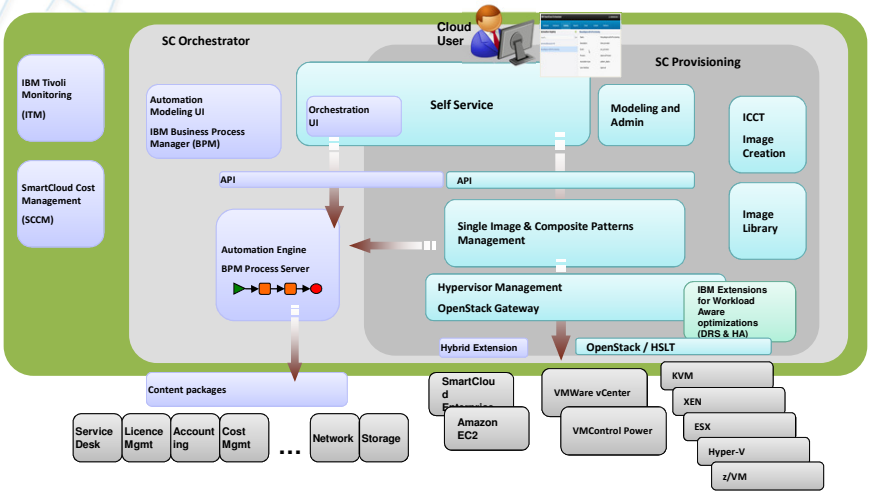


IBM SmartCloud Solutions

SmartCloud Orchestrator upgrade path

SmartCloud Orchestrator upgrade path

High Level Architecture



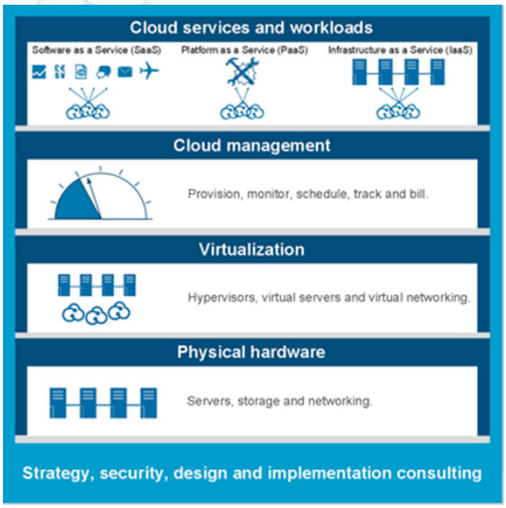
IBM SmartCloud Solutions

Customer Offerings

IBM SmartCloud Solutions

Customer offerings

Create topologies according to customer application needs



X86 blades
Power blades
zEnterprise

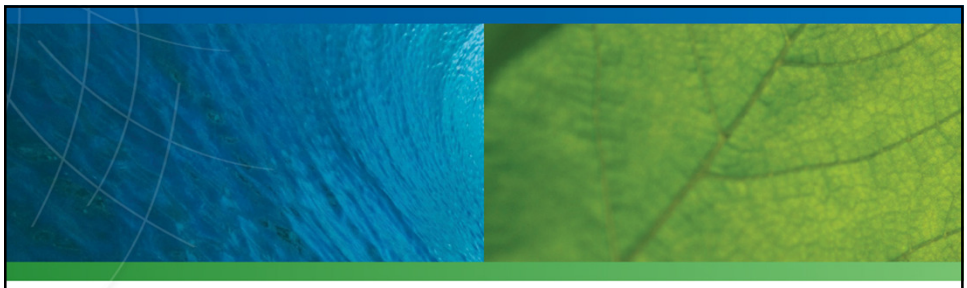
IBM SmartCloud Solutions

Benefits

IBM SmartCloud Solutions

SmartCloud Provisioning's Benefits

- Addresses the service management needs of a DC
- Provides solid base for cloud enabled DC
  (see add-on low cost products)
- Is OPEN
- Is CHEAP
- Is EASY & FAST …to install, …to operate
- Has a low TIME TO VALUE
- Has a low IT learning curve (14 hrs OL)



Questions?