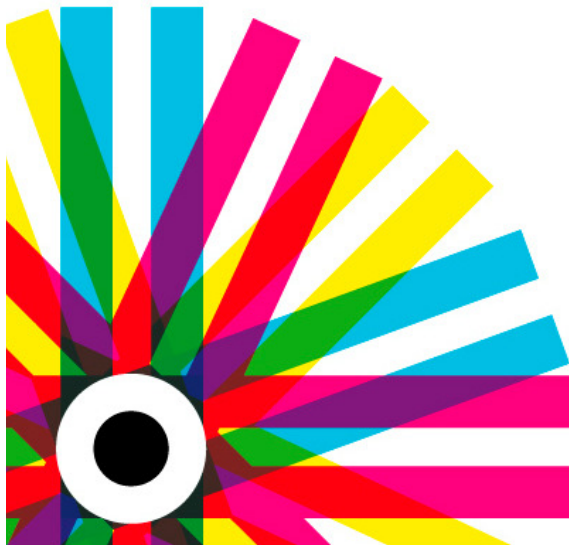




**Marco Sebastiani**

Product Manager – Tivoli Cloud Solutions

Strategia ed evoluzione dei prodotti  
Tivoli per il Cloud Computing



**IBM Tivoli User Group 2012**

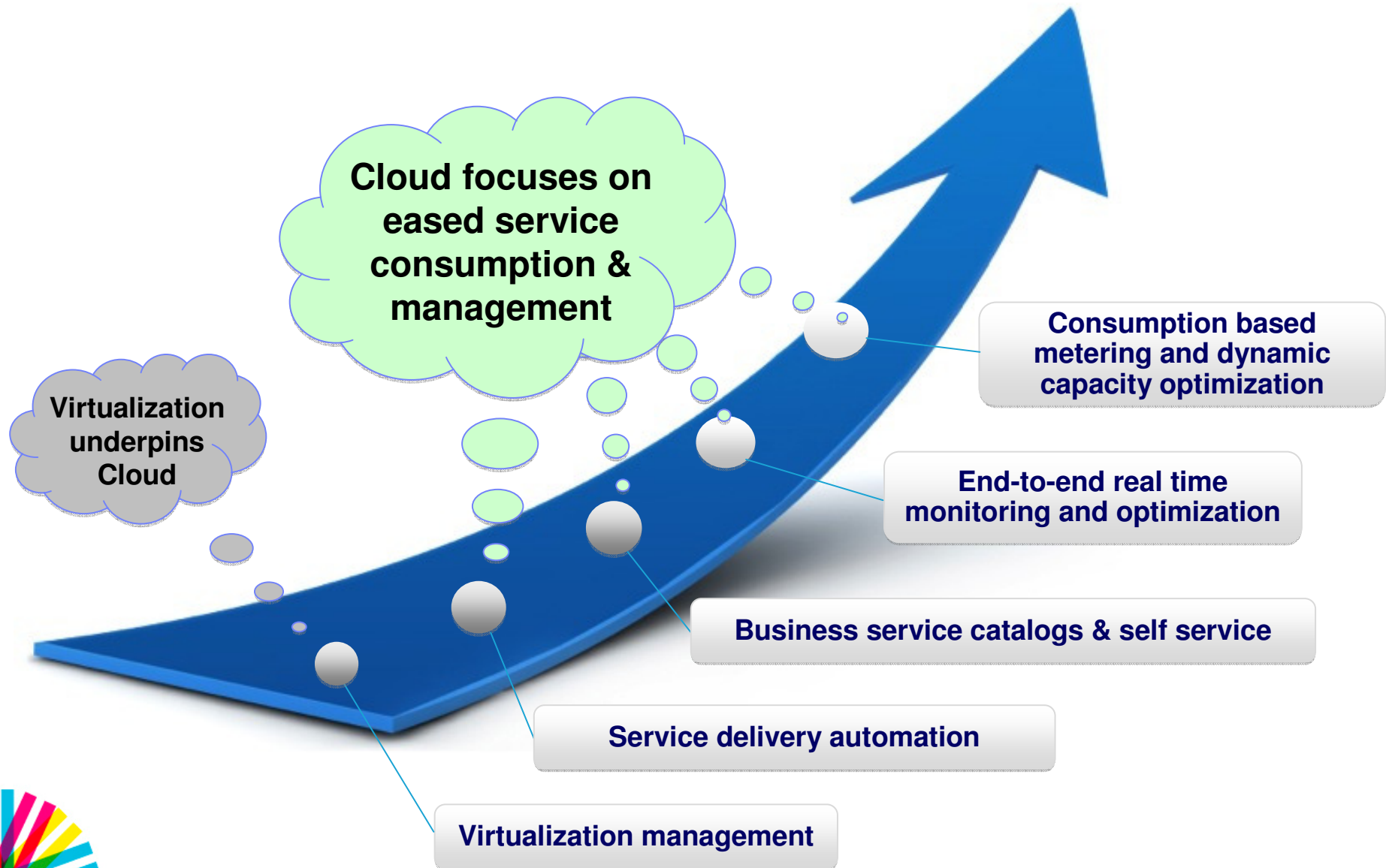


## Agenda

- **Cloud management at all stages of adoption**
- **Roadmap update**



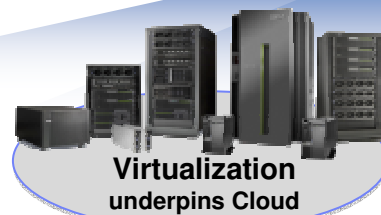
# The Journey to “Cloud Computing”



As enterprises move beyond **virtualization** to higher value stages of Cloud, having Cloud Management is critical to their success.

**Organizations need progressive capabilities as they manage their Clouds**

	Key Capabilities		Extended Value
1.	Virtualization Optimization	+	Get Maximum value out of your VMware or other virtualized environment.
2.	Cloud Enabled Data Center	+	Enable Infrastructure Agility and Automate cross domain service delivery across your entire data center
3.	DevOps	+	Accelerate application updates to respond faster to stakeholder demands and competitive threats



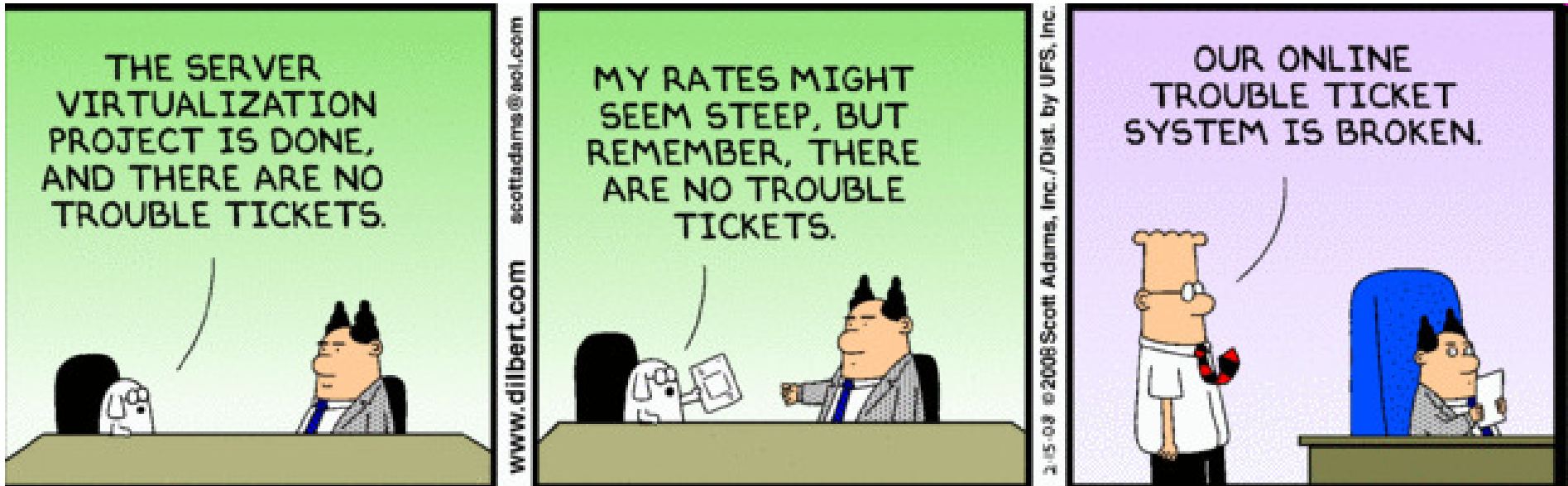
# Virtualization Optimization



Get Maximum value out  
of your virtualized



**“Virtualization without service Management is even more dangerous than not virtualizing in the first place” - Gartner**



You have virtualized but have you optimized?

- 1. How do you know what is running in your Images? Which ones have critical security vulnerabilities? Which ones have blown up your license counts?**
- 2. Can you achieve 98.5% first pass patch compliance across 250K images with 1 server using 1 console?**
- 3. Can you monitor physical and virtual resources from Storage and VMs up to the application?**
- 4. Can you run capacity analytics to reduce bottlenecks and improve utilization by 75%?**
- 5. Can you back up 1000 VMs in 34 mins?**
- 6. Can you create and standardize application patterns to reduce application deployment time by 99%?**

**Can you achieve these outcomes in a single, integrated, extensible, standards based solution that plugs into your existing environment?**



### Optimize your Virtualized Investment

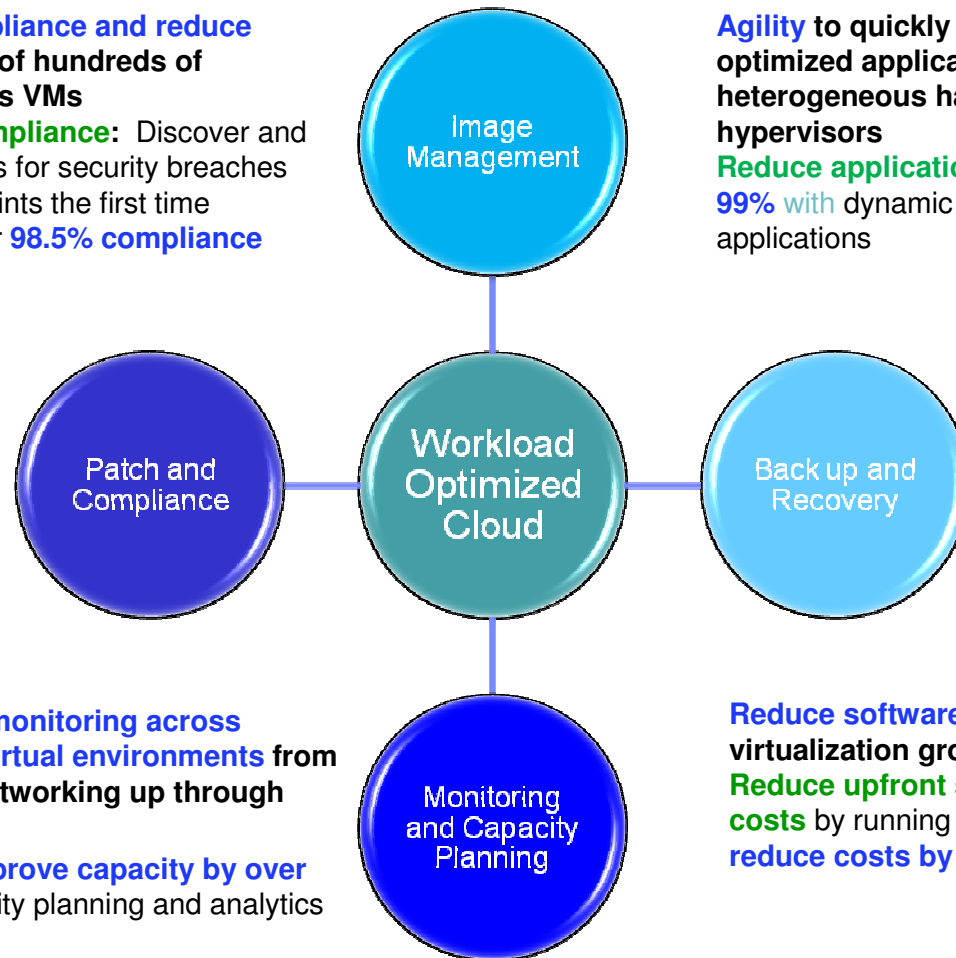
*Optimization can be in one or more entry points based on need*

**Improve compliance and reduce permutations of hundreds of heterogeneous VMs**

**Improved Compliance:** Discover and analyze images for security breaches to patch endpoints the first time around for over **98.5% compliance**

**Agility** to quickly deploy new, scalable, optimized applications in minutes across heterogeneous hardware and hypervisors

**Reduce application deployment time by 99%** with dynamic and optimized applications



**Reduce back up and recovery time as data center grows 40%-60%**  
**Improve TTV** by backing up **1000 VM in 34 mins** while reducing storage footprint by **90%**

**Visibility with monitoring across physical and virtual environments from storage and networking up through applications**

**Lower TCO Improve capacity by over 75%** with capacity planning and analytics

**Reduce software and server costs as virtualization grows 10x**

**Reduce upfront server and software costs** by running on open source to **reduce costs by 25%**





## Cloud Enabled Data Center

Enable Infrastructure Agility  
and Automate cross domain  
service delivery across your  
entire data center



You optimized your virtual environment, but do you have dynamic infrastructure agility?

1. Can you **automate and orchestrate services** across **Intel, Power, and Z** running a mix of **ESXi, KVM, PowerVM, Xen, HyperV, and zVM**?
2. Can you **reduce effort and time to deploy an application and automate its attachment to your management systems by 95%**?
1. Can you respond faster to business needs by **reducing storage and networking provisioning by 85%** ?
2. Can you analyze capacity to reduce bottlenecks and **improve utilization by 75%**?
3. Can you improve reuse with public cloud services by **reducing hybrid integration time by 80%**?
4. Is your metering framework extensible enough **for predicting and measuring storage and networking usage and costs**?

**Can you achieve these outcomes in a single, integrated, extensible, standards based orchestration engine?**



## The IT challenges

### Infrastructure

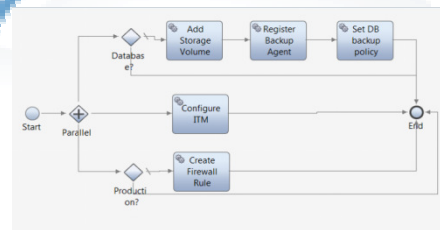
We have lots of tools, to manage **isolated automation tasks**

But getting everything coordinated is challenging and **takes a lot of time**

### Operations

Releasing a new application in production **is a lot more than creating a virtual machine.**

I need to link tens of different tools, people, departments. It **takes weeks.**



### Development

I need to **accelerate delivery** and improve feedback between development and production.

### Business

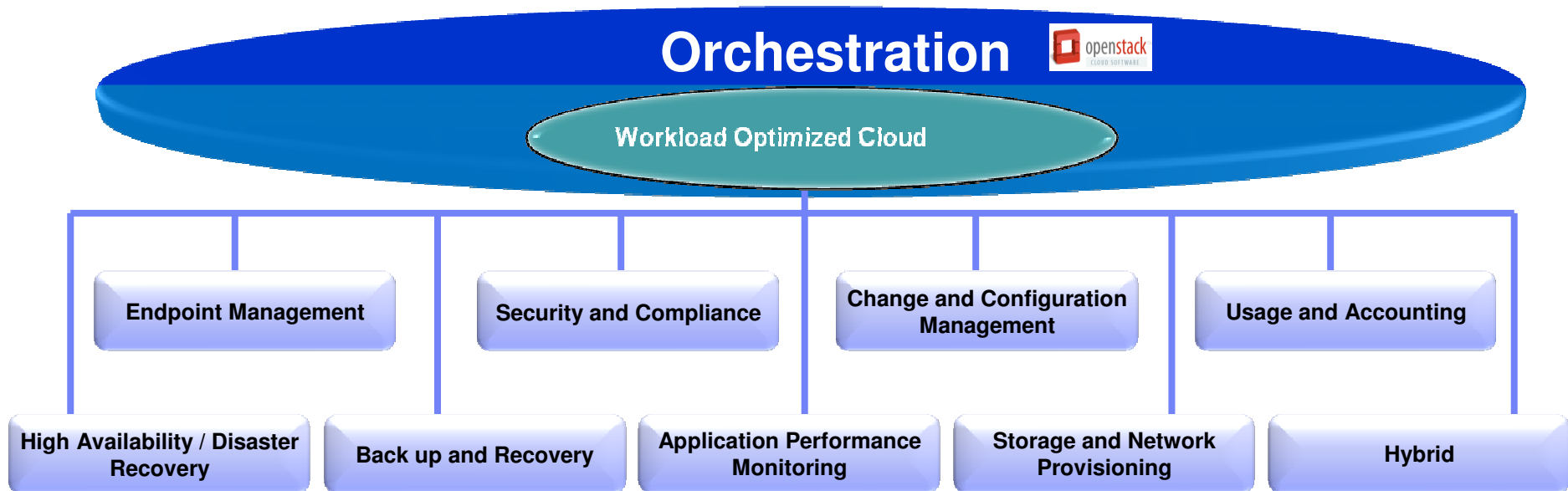
I need to **react quickly to market demand.** IT is not fast enough to support my strategy and is slowing down innovation



## Manage your Dynamic Data Center with Flexibility

*“I need to drive down the cost of administering our applications and environments “*

*Integrated, optimized platform for designing workflows to fully customize services offered to users*



### IBM Advantage:

- OOTB content for configuring common resources
- Open, extensible platform to integrate with 3<sup>rd</sup> party resources
- Seamless integration to IBM management solutions to facilitate cross/up sell

### Benefits:

- Up to **70% reduction** in change-related outages
- More than double storage utilization to **82%** and reduced their reliance on Tier 1 storage by over **50%** [Sprint]
- 91% ROI** with breakeven of 1.1 years after APM deployment
- Reduction in outages by **30%-40%** to save an average of **\$500,000** per year [CIB Bank]



## DevOps

Accelerate application updates to respond faster to stakeholder demands and competitive threats



Are you able to improve delivery efficiency, application quality, and performance of your application lifecycle?

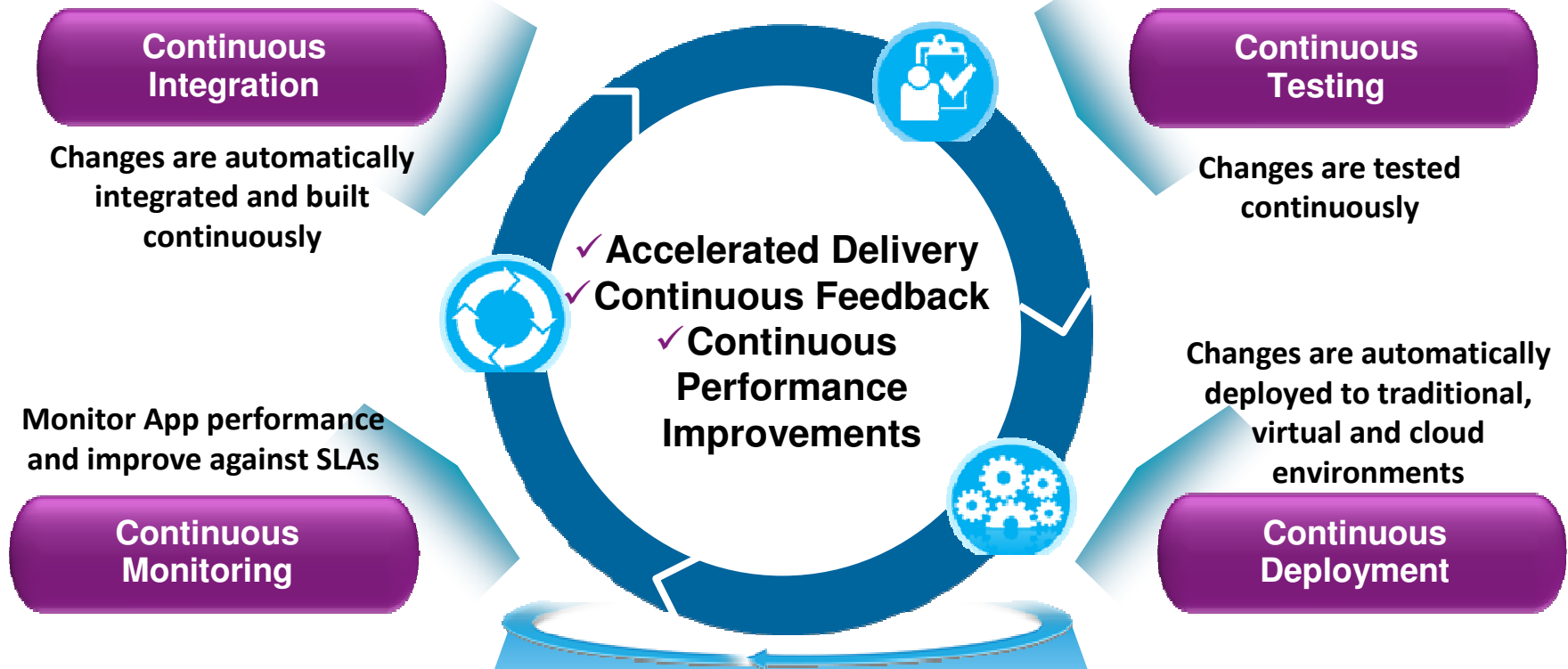
1. *Can you deliver updates to your key applications every day?*
2. *Can you reduce the application environment deployment time by 50%?*
3. *Can you reduce outages caused by production roll-outs by 40%?*

***Can you achieve these outcomes in a single, integrated, extensible, standards based solution that facilitates continuous feedback and automation between development and operations?***



GA  
October  
30

## Accelerate Delivery by Standardizing on Process and Technology



Reduced project delays by 66 %



Reduced quality issues by 77%



Achieved 100% on time delivery



Reduced TTM by 40%



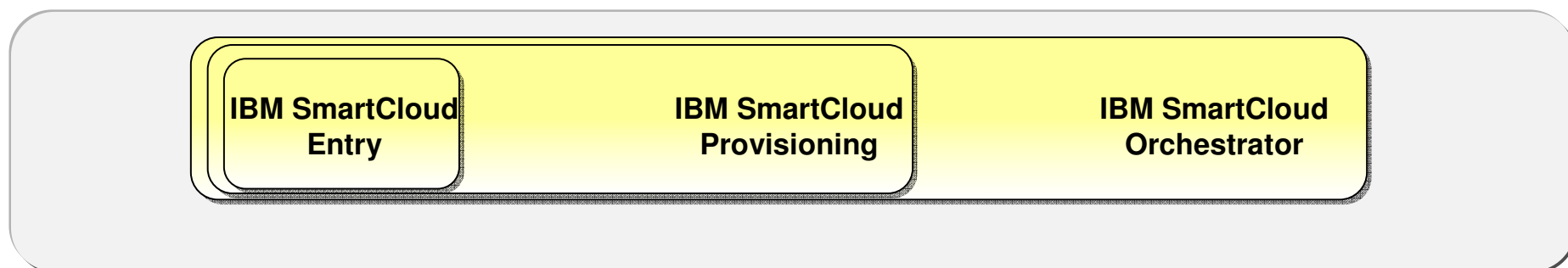
# Roadmap update





## Moving to an integrated offering structure

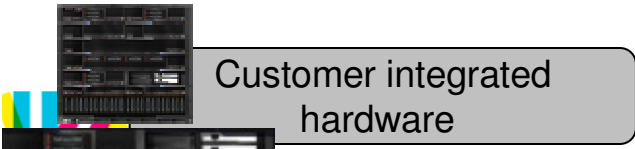
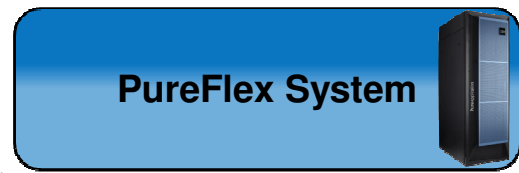
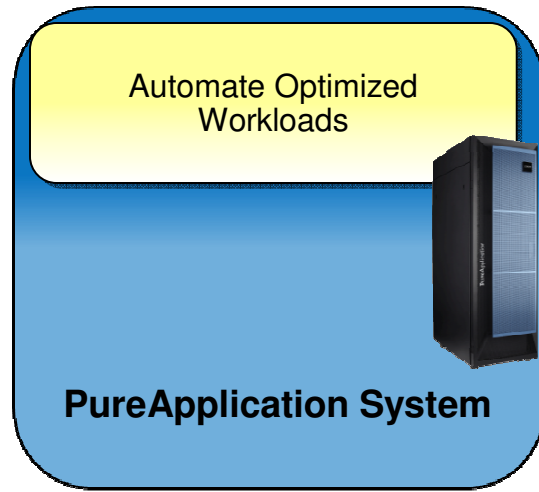
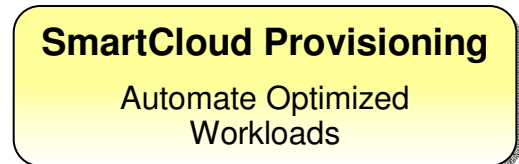
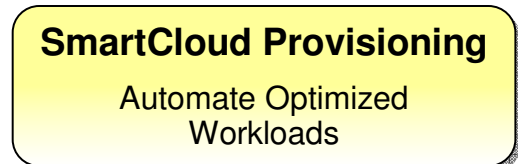
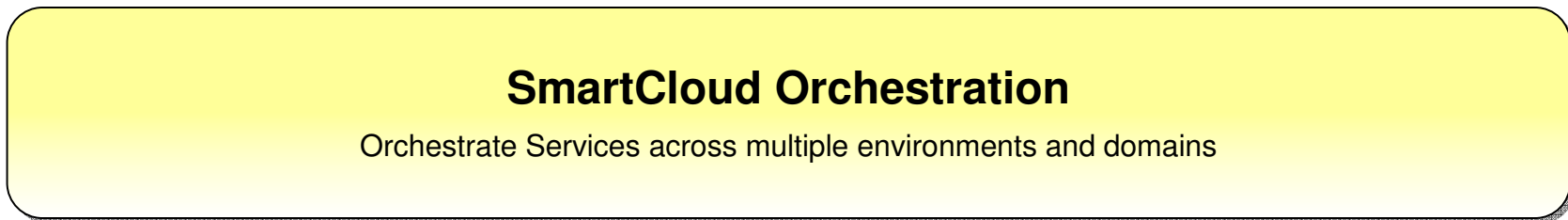
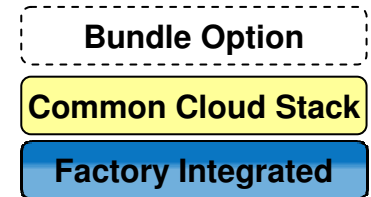
- Convergence into a 3 tier structure, with increased Client Value at each tier
- Creation of **common, standards based architecture**
- **Clean upgrade paths with progression**



## Support an Evolutionary Approach

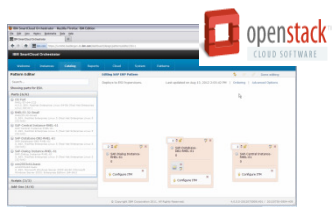
### LEGEND

- Convergence into a 3 tier structure, with increased Client Value at each tier
- Creation of **common, standards based architecture**
- **Clean upgrade paths with progression**

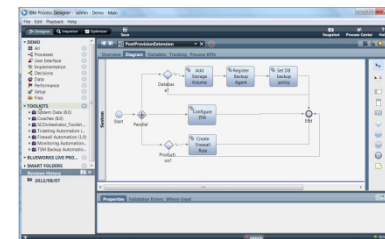


## What is SmartCloud Orchestration?

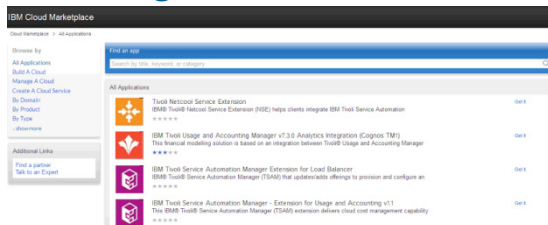
An open and scalable cloud platform



An easy to use orchestrator for cloud service automation



A marketplace for content sharing and re-use



A rich set of ready to use automation library



A typical scenario: create a new cloud service to deploy SAP

## Step 1 – Graphically compose the application topology

The screenshot displays the IBM SmartCloud Orchestrator interface in Mozilla Firefox. The browser title is "IBM SmartCloud Orchestrator - Mozilla Firefox: IBM Edition". The address bar shows the URL: <https://xvm066.boeblingen.de.ibm.com/dashboard/design/patterns/editor/?id=1>. The page header includes "IBM SmartCloud Orchestrator" and user information: "Administrator | Help | About | Logout".

The main navigation bar contains tabs: "Welcome", "Instances", "Catalog", "Reports", "Cloud", "System", and "Patterns". The current view is the "Pattern Editor" for an "Editing SAP ERP Pattern".

On the left side, there is a "Parts (6/6)" list:

- OS Part (RHEL-57-64-CCS)
- RHEL55-32-Small
- SAP-Central Instance-RHEL-61
- SAP-Database-DB2-RHEL-61
- SAP-Dialog Instance-RHEL-61
- win2003x64.basic

Below the parts list are sections for "Scripts (3/3)" and "Add-Ons (4/4)".

The main workspace shows a graphical topology with three components:

- A "SAP-Dialog Instance-RHEL-61" component (count 2).
- A "SAP-Database-DB2-RHEL-61" component (count 1).
- A "SAP-Central Instance-RHEL-61" component (count 1).

Each component has a "Configure ITM" button. A speech bubble points to the parts list with the text: "Library of virtual templates, sw packages, script, add on ( disks, network cards, etc)". Another speech bubble points to the graphical editor with the text: "Graphical editor for composing and configuring workloads".

At the bottom of the page, there is a copyright notice: "© Copyright IBM Corporation 2011. All Rights Reserved." and a version identifier: "4.0.0.0-20120730091401 / 20120730-0904-439".



A typical scenario: create a new cloud service to deploy SAP

Step 2 – Compose automations required at deployment time

The screenshot shows the IBM Tivoli automation designer interface. The main workspace displays a workflow diagram with the following steps: Start -> Get VM Configuration -> Parallel split -> Register Backup Agent -> Create OS Backup Policy -> Is MS SQL Server decision -> Invoke MS SQL Server Configuration -> Create DB Backup Policy -> Join -> Change Ticket Status -> End. A callout points to the workflow diagram: "Graphical editor for composing and connecting workflows".

On the left, a "TOOLKITS" pane lists various automation assets. A callout points to this pane: "Access to rich libraries (toolkits) of reusable automation assets that enable to speed automation creation". Below this, a "Palette of library assets enable easy workflow composition through drag and drop" callout points to the list of actions.

At the bottom, a "Behavior" pane shows configuration options for an action, including "Loop Type" (None, Multi Instance Looping, Simple Looping). A callout points to this pane: "Easy workflow action editing for managing: data mapping, error recovery options, implementation details, etc.".

Another callout points to the top toolbar: "Rich tooling functions to edit, version, debug, optimize workflows".

A final callout points to the right-hand side of the interface: "Rich set of actions types, flow control, data handling primitives that simplify creation of complex automations".



## A typical scenario: create a new cloud service to deploy SAP

### Step 3 – Publish service in the catalogue

The screenshot shows the IBM SmartCloud Orchestrator interface. At the top, there is a navigation bar with 'Welcome', 'Service Catalog', 'Service Requests', and 'Instances'. The 'Service Catalog' is selected. Below the navigation bar, there is a search bar with 'All Categories' and 'Search for a Service...'. The main content area is divided into several sections:

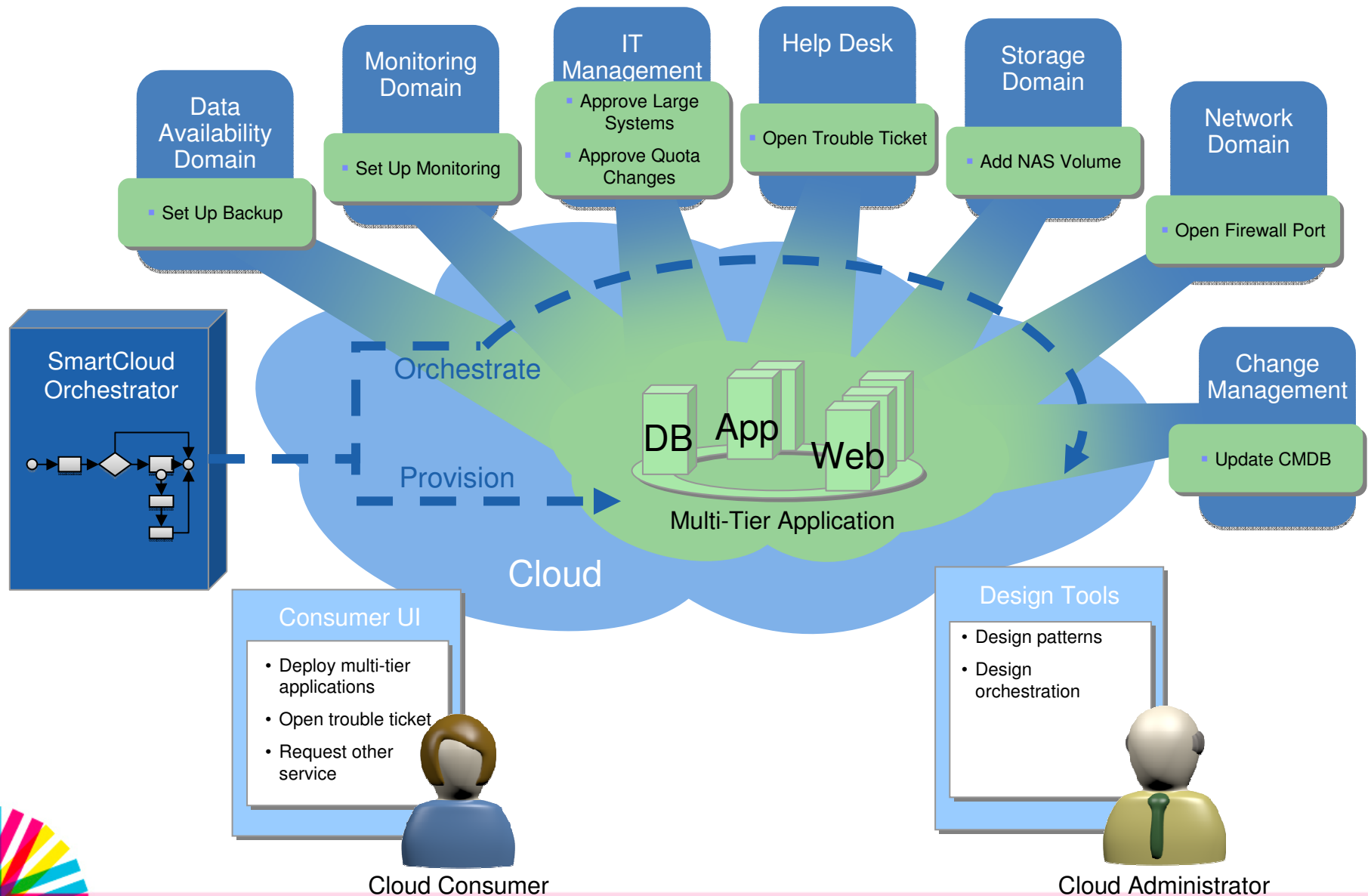
- My Favorites:** The service offerings which you marked with the label favorites.
- Network Services:** These service offerings allow you to manage network services.
- Storage and Backup Services:** These service offerings allow you to manage storage and backup services.
- Customer Onboarding Services:** These service offerings allow you to manage customer onboarding services.
- Development and Test Services:** These service offerings allow you to define new development and test services.
- New Servers:** These service offerings allow you to add additional server such as Windows 7 Server, or Linux RH Server.
- Database Servers:** These service offerings allow you to add additional database in an existing environment.
- Software Installation:** These service offerings allow you to install software on a server.

On the right side, there is a 'My Service Requests' section with a 'P12' badge. It shows a summary of requests: 3 in progress, 5 pending, 7 successful, and 2 failed. Below this is a 'Recent Activity' list with 10 items, each with a status icon (checkmark or X) and a request ID.

Manage My Service Requests...



## An open orchestration platform for cloud automation



Cloud Consumer

Cloud Administrator

# Thanks

