

Jazz on Cloud

– A Technical Preview

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First, a story...



Why we created the Jazz Sandbox



Our Presentation Today...

What business problems are we trying to solve?

How does “cloud technology” help us?

A peek at some experiments from the lab



Business Problems

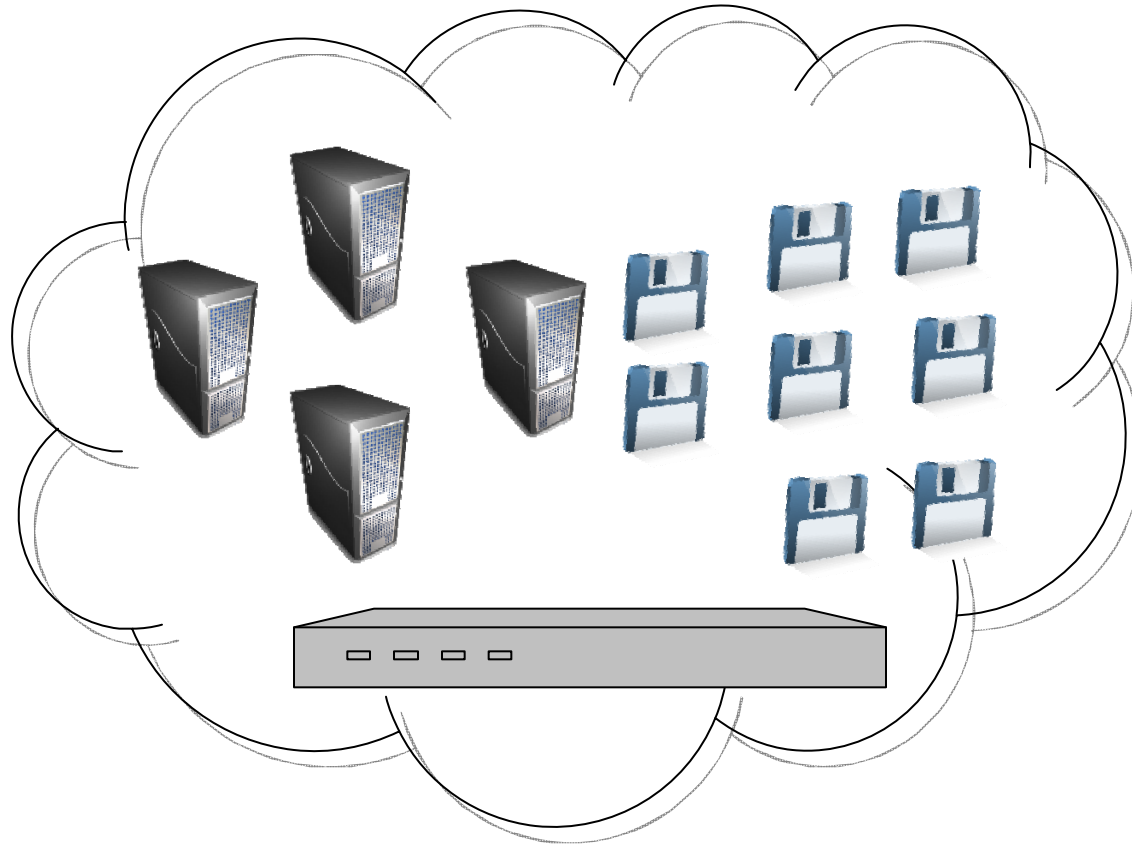
Enterprise software costs too much to deploy and run

It takes too long to get value out of enterprise software

Cloud computing can help



What is cloud computing?



- Virtualization
- Images
- Service Catalog
- Provisioning
- Elasticity
- Management/Billing System
- Accessed over network



Sorry... I asked: What is cloud computing?

Stuff as a Service

WHAT AS A SERVICE?

Business Process as a Service (BPaaS)

Business processes as a service; e.g. indirect procurement, payment processing etc...

Software as a Service (SAAS)

Software as a service e.g. email, CRM, eCommerce, merchandise optimization etc...

Platform as a Service (PAAS)

Application servers, databases, middleware, development tools as a service

Infrastructure as a Service (IAAS)

Infrastructure such as servers, storage, file-systems as a service

HOW IS IT DELIVERED?

Public Clouds

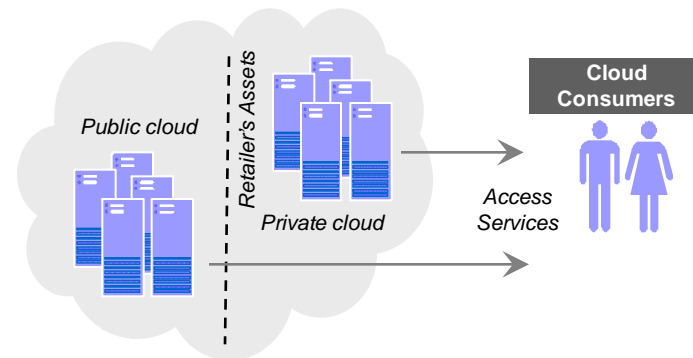
Customer **rents the capability**

Private Clouds

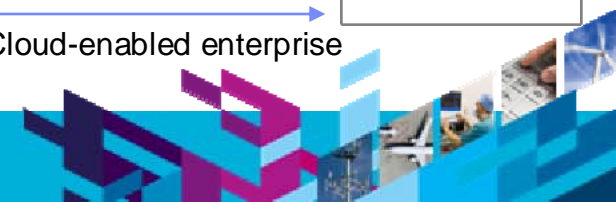
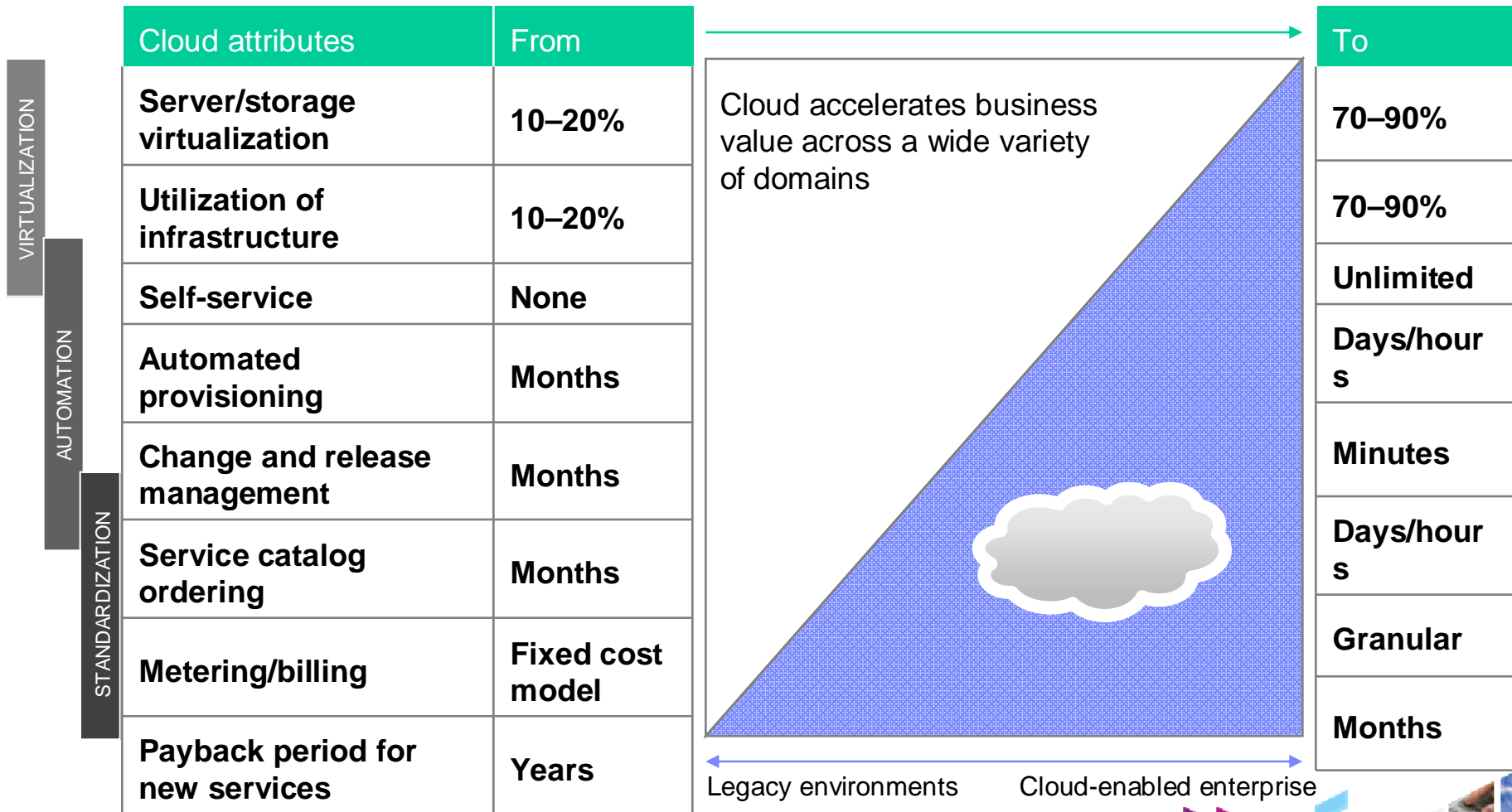
Customer IT **buys the capability** to deliver cloud services within the enterprise

Hybrid Clouds

Combine elements of public and private clouds



Cloud Computing Apple Pie



Getting concrete

Problem

- We (Rational) want to make CLM accessible for tire-kickers
- We serve CLM solutions to our constituents (or customers)
- We have lots of isolated, short-term projects

How can we help?

- *The Sandbox*: Make it easy to get your own RTC project
- Simplify administration, increase automation, leverage virtualization
- Make it easy to provision your own CLM instances



Jazz Sandbox

(<http://jazz.net/sandbox>)



Create your own private Team
Concert 2.0 project area in
seconds

Invite others to join your project to collaborate

Under Development Working on a CLM Sandbox that
lets you press a button for a project that spans the
lifecycle (requirements -> dev -> test)



Problem that CPA solves

- A CLM “Solution” comprises multiple products
 - ▶ RTC for Work Items, Planning, Build, and SCM
 - ▶ RRC for Requirements
 - ▶ RQM for Quality Management
 - ▶ Possibly others
- Products must be configured to be integrated
- Each product has its own notion of “Project”
 - ▶ Projects must be created in each product
- Projects must be “linked” to enable CLM Flows
- Users must be created and enabled in each product



Common Project Admin

Under Development

Create and manage aggregate projects that span the lifecycle

View user membership across lifecycle contexts

Identify role assignment mismatches (e.g. anyone who has a “Test Professional” role in Quality Manager must also have at least a “Contributor” role in Team Concert).



With rapid, automated setup through a self-service portal that is designed for ease of use, you can deploy a service within minutes.

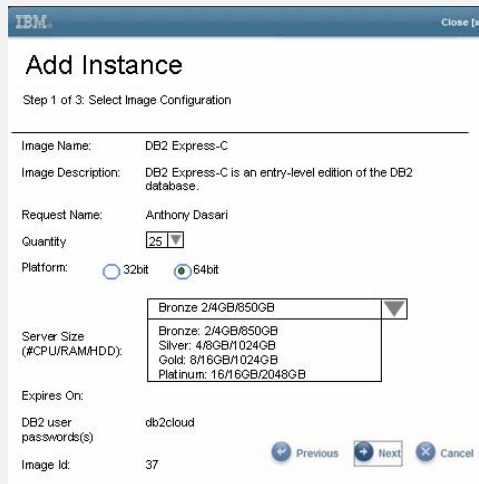


Click and choose the service you need



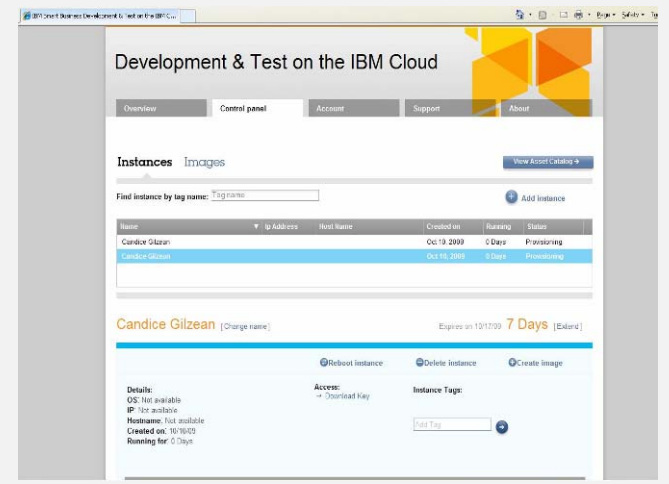
Step 1

Choose the hardware and usage configuration

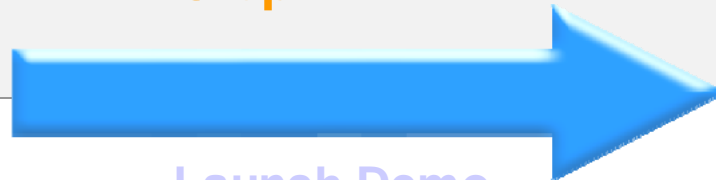


Step 2

Application provisioned and ready to run



Step 3



[Launch Demo](#)



What might this mean? A Jazz Portal to the Clouds...

3. Applications run in the cloud, administered via the Portal. Infrastructure details hidden from the user.



2. Portal dynamically provisions capabilities on the cloud, launching preconfigured VM Images

Self-Service Portal
• Instance Management
• Common Project Admin

4. Users manage their capabilities and access their projects through the portal, then work in the applications.

1. Team Lead registers, request projects, capabilities.



Team Lead



Analyst



Developer



Tester



Some Issues to consider

- Managing users
- Virtualization and Performance
- Licensing
- How well does RTC work in a virtual environment?
- Multi-Tenancy
- ...



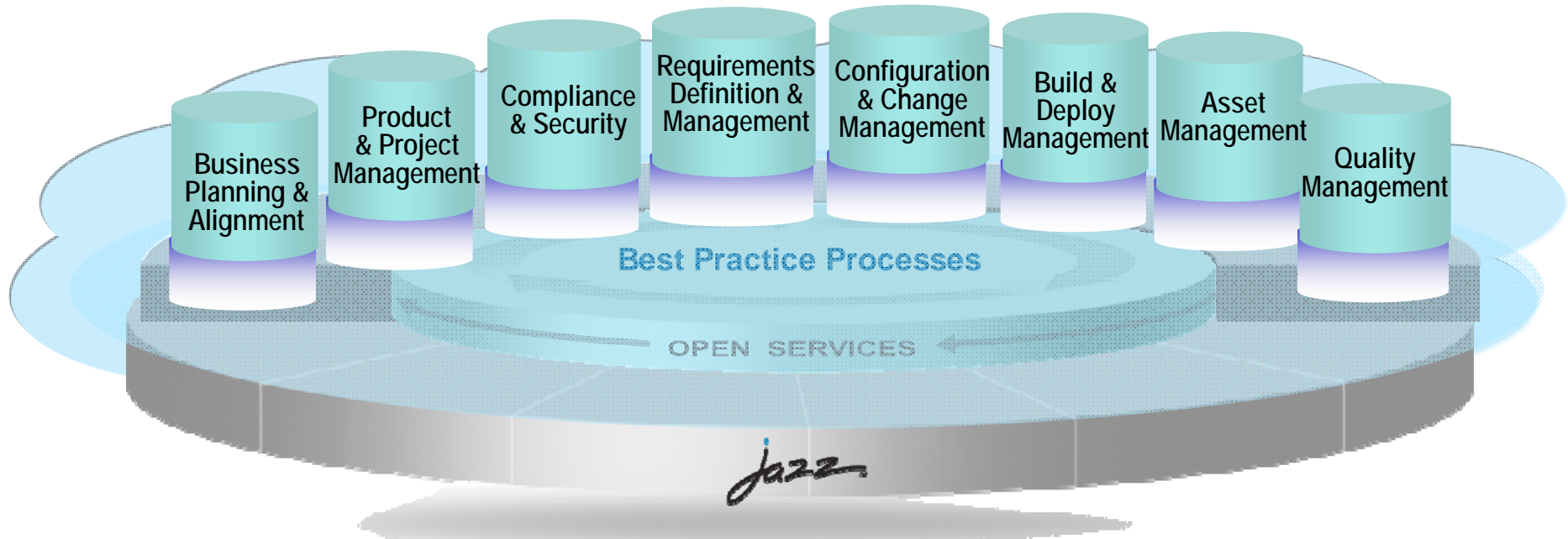
Dealing with multi-tenancy: Options

- Project-level: Lightweight, low isolation
 - ▶ Some cross-project visibility
 - ▶ Cross-tenant invariants
 - Same software version, IP filtering, VPN/VLAN settings, process choices, etc.
 - ▶ Very economical
 - ▶ A bit of a mismatch:
 - Binds a notion of work-scope (project) to a privacy notion (tenant)
- Application level: Medium-weight, high isolation
 - ▶ No shared repository
 - ▶ Can bind applications to specific IP addresses/virtual network adapters
 - ▶ Still share machine-level facilities
- Virtual machine level: Heavyweight, high isolation
 - ▶ Expensive – one VM per ‘tenant’
 - ▶ Enables a logical “shared nothing” model



2010: Jazz "on the cloud"

Delivering an "instant on" collaborative ALM solution



IBM Rational Software Delivery Services for Cloud

- Gain immediate access to a fully integrated collaborative application lifecycle management (ALM) environment.
- Dramatically reduce up front costs by reducing acquisition costs.
- Cost effectively test solutions in the cloud to optimize your software delivery life cycle



More clouds on the horizon

- Where we're going
- The Sandbox
 - ▶ Available for tire-kicking Today.
- Features to reduce TCO and admin costs:
 - ▶ Available as part of the Rational Workbench for Collaborative Lifecycle Management
- Software As A Service: What would you find useful in the future?



Questions





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