Developer Cloud 開發攜手向雲端

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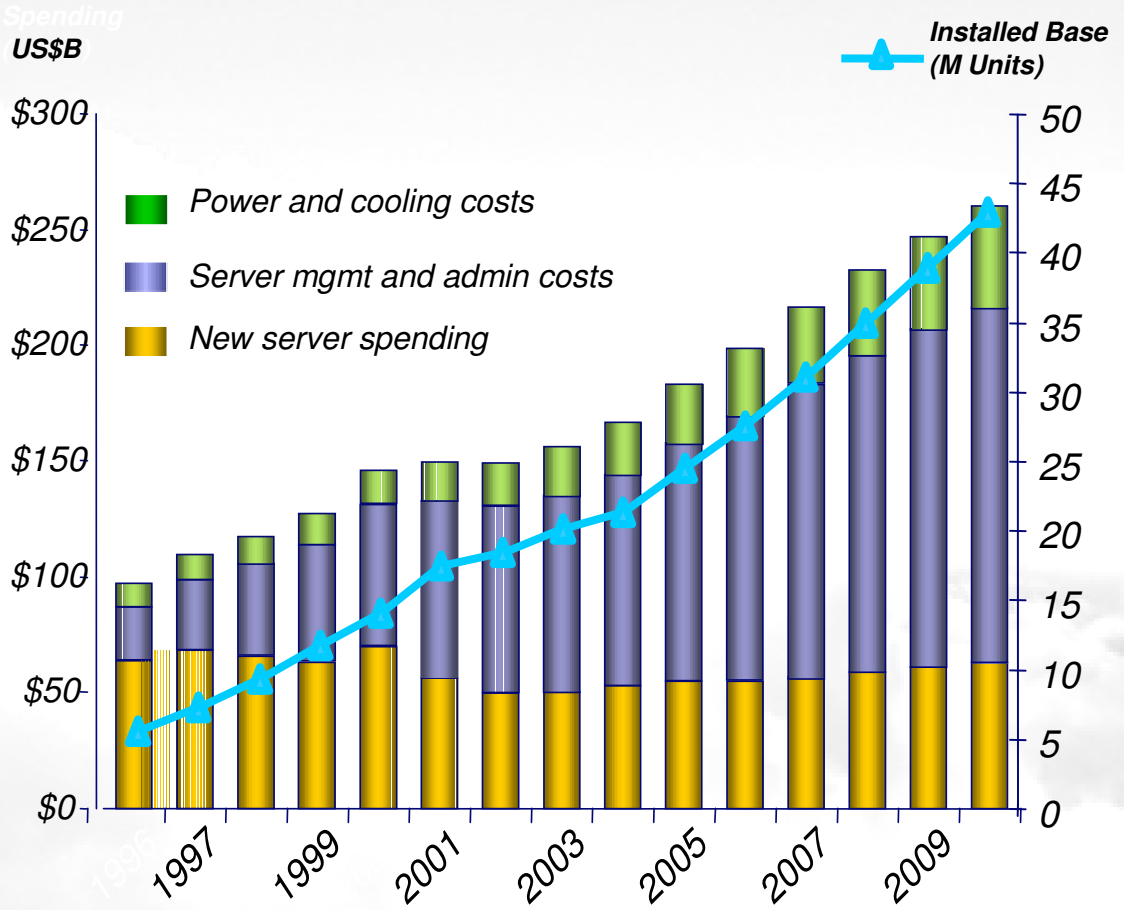
IBM SWG, Rational

Business Problem – IT costs are increasing

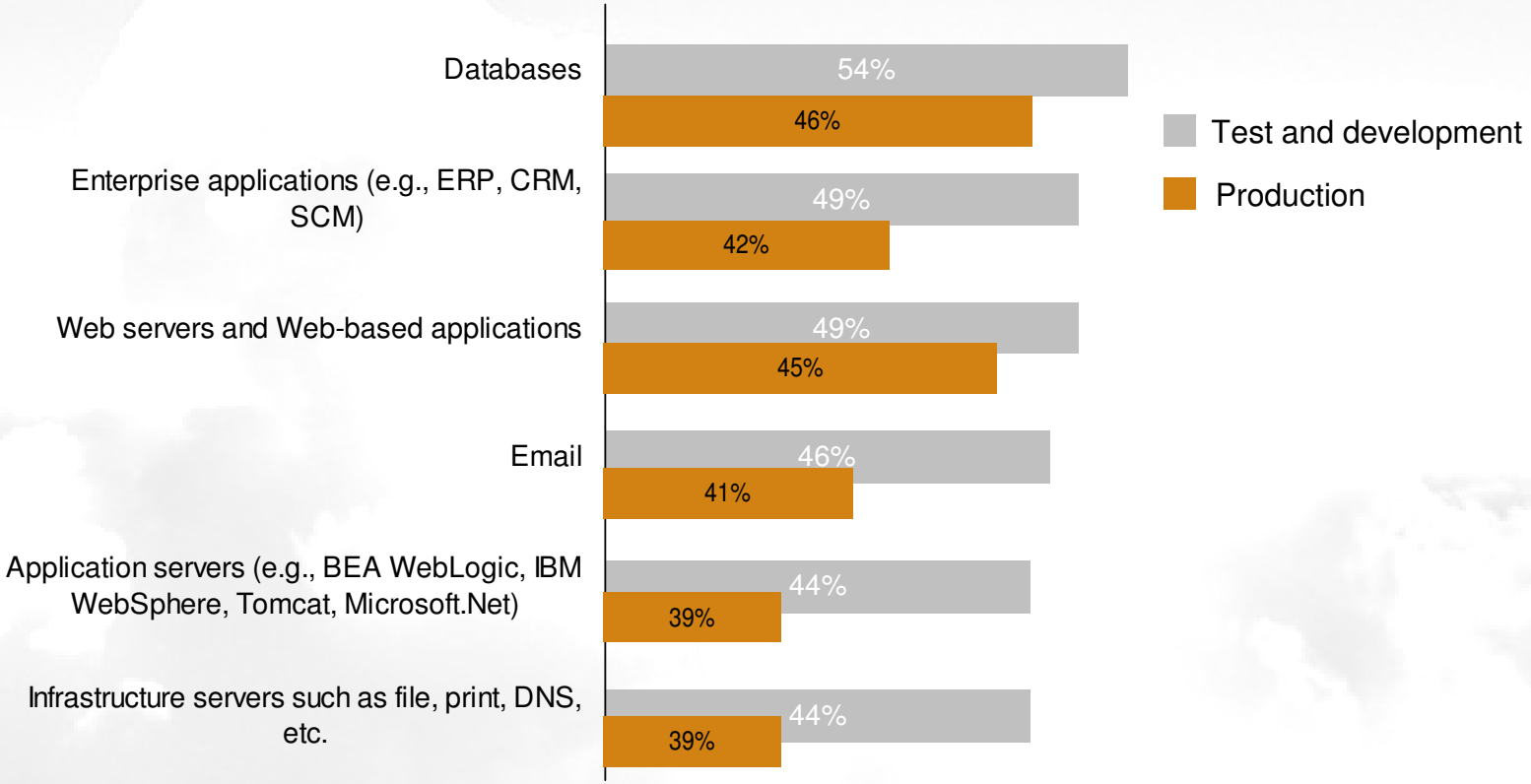
- *Costs to manage systems has doubled since 2000*
- *Costs to power and cool systems has doubled since 2000*
- *Devices accessing data over networks doubling every 2.5 years*
- *Bandwidth consumed doubling every 1.5 years*
- *Data Doubling every 18 months[1]*
- *Server processing capacity doubling every 3 years[2]*
- *10G Ethernet ports tripling over the next 5 years*



Source: IDC, 2008
[1]WW TB Capacity Shipped on Enterprise Disk Storage Systems
[2]Server processing consumption doubles every 3 years

Enterprises are more comfortable with test and development "in the cloud" than production use

"For each of the following workloads, what is your company's type of use or expected type of use for pay-per-use hosting of virtual servers?"



Base: 439 North American and European hardware decision-makers at enterprises with interest in or implementation of pay-per-use hosting of virtual servers

Source: Enterprise And SMB Hardware Survey, North America And Europe, Q3 2008

IBM Rational Software Delivery Services for Cloud Computing

Optimize investments → ***Lower costs with dynamic provisioning*** → ***Enabling IBM agility@scale*** → ***Collaboration & governance in cloud delivery***

Rational. software

BETA

1. IBM Smart Business Dev & Test on the IBM Cloud
2. IBM Rational Software Delivery Service for the Cloud

700+ registered users
Rational Beta Kickoff 5 Clients

VIRTUALIZATION + **STANDARDIZATION** + **AUTOMATION** = **Cost** **Flexibility**

IBM **Strategy & Change Consulting for Cloud**
Testing Services for Cloud
Global Business Services

IBM **IBM Smart Business Test Cloud Services**
Global Technology Services

An evolution of *Jazz* in the Cloud

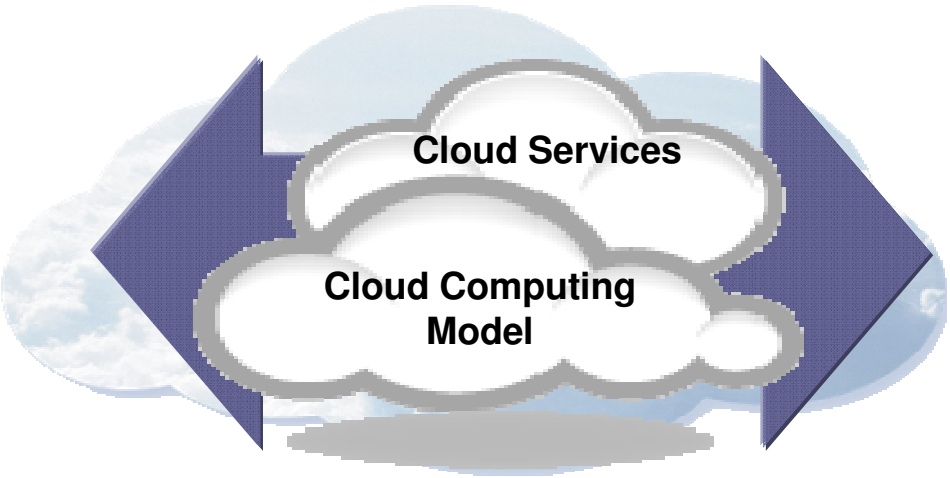
Software Delivery Processes

Cloud Drives New Sourcing Options

Private …

Client owned and managed.

Access defined by client.



Public …

Service provider owned and managed.

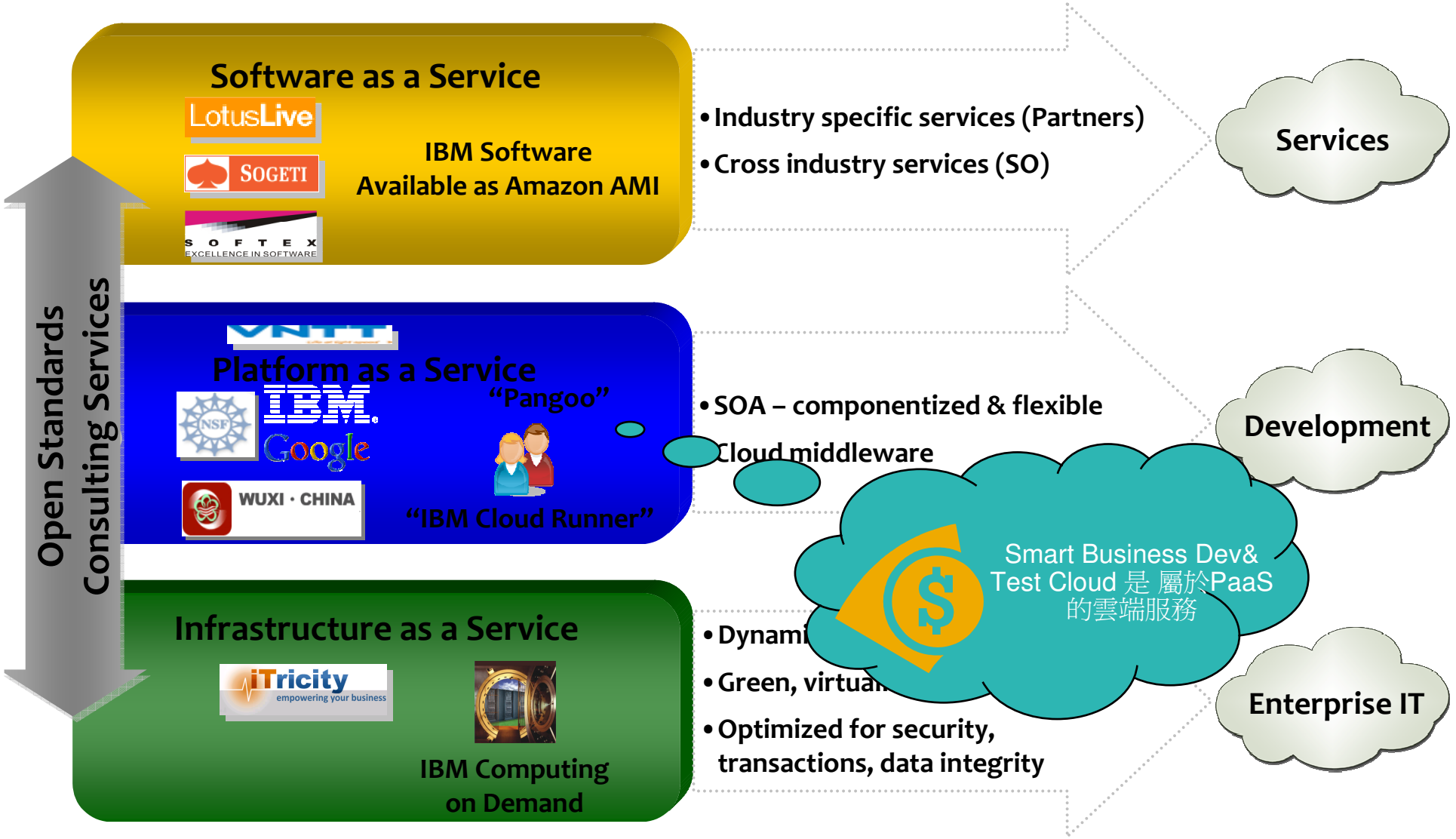
Access by subscription.

…. Customization, efficiency, resiliency, security and privacy

….Standardization, capital preservation, flexibility and time-to-deploy

GOVERNANCE

On-ramps to Cloud Computing Services



The Cloud

"Cloud" is a new consumption and delivery model **inspired by consumer Internet services.**

Cloud enables:

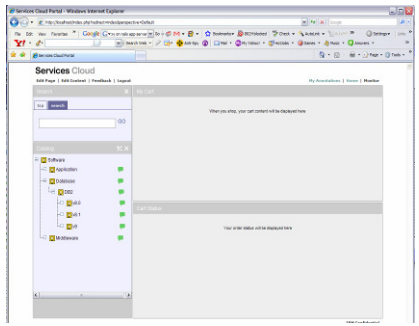
- Self-service
- Sourcing options
- Economies-of-scale

IBM Smart Business Dev & Test Cloud 率先實現了 Self-Service 的典範

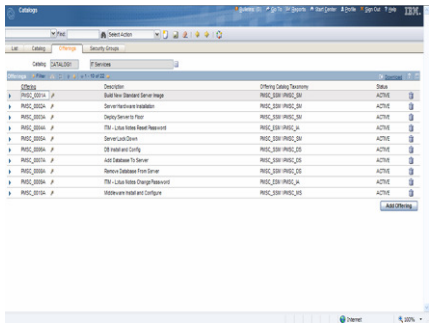
“Self-service” Drives Process Standardization

End Users

Service Portal



Service Request Catalog



Provisioning Engine
- Workflows
- Expert Systems
- Scripts

Optional Service Modules
- e.g. Metering/ Usage Billing, Monitoring, etc.

Virtualized Cloud Infrastructure

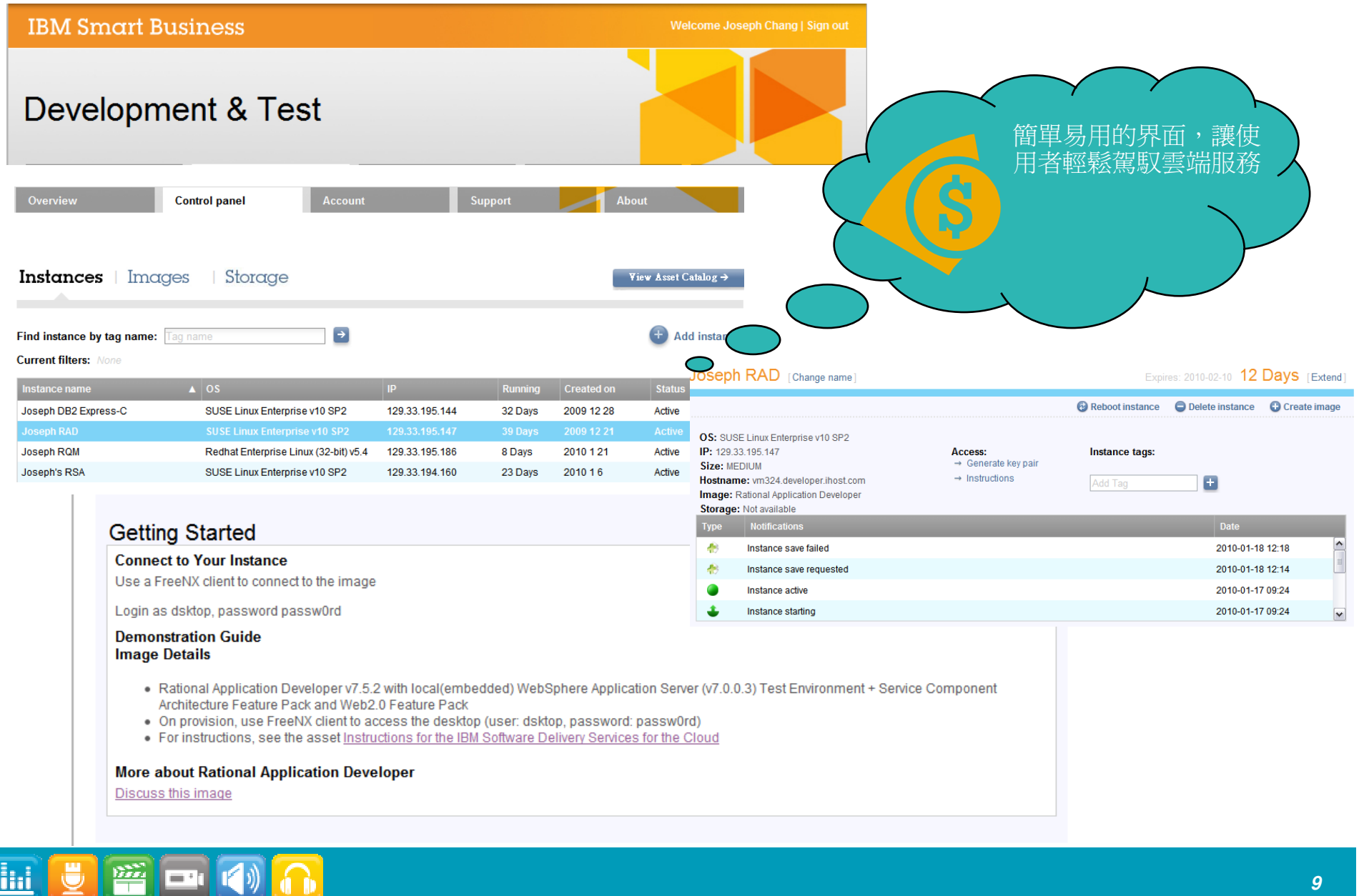
Benefits:

Lower cost

Ease-of-use and access

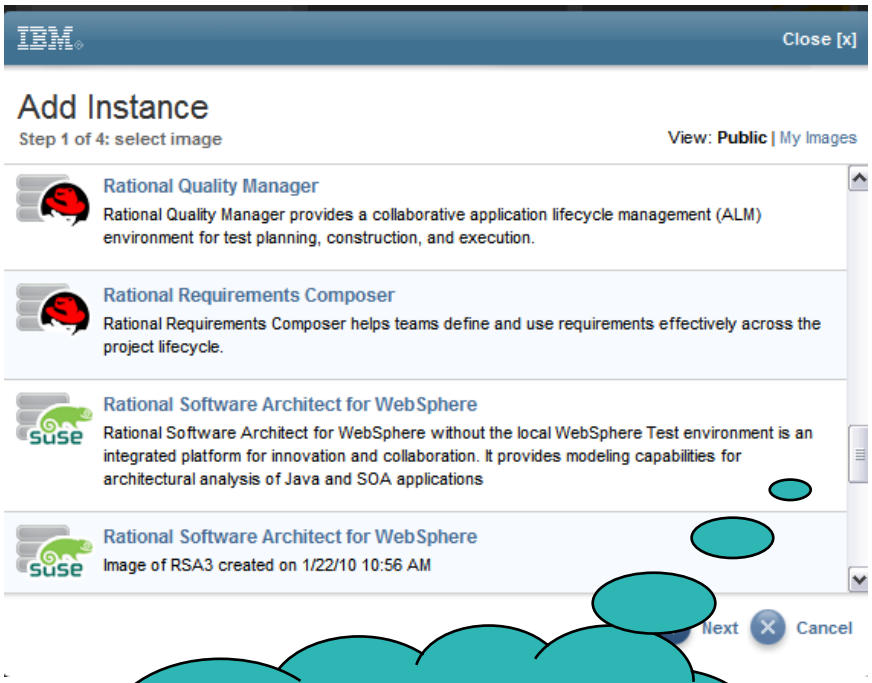
Process transformation

請上 https://www-949.ibm.com/cloud/developer 感受一下 雲端self-service


IBM Smart Business
Welcome Joseph Chang | Sign out
Development & Test
Overview
Control panel
Account
Support
About
Instances | Images | Storage
View Asset Catalog →
Find instance by tag name:
Tag name
Current filters: None
Add instan
Instance name | OS | IP | Running | Created on | Status
Joseph DB2 Express-C | SUSE Linux Enterprise v10 SP2 | 129.33.195.144 | 32 Days | 2009 12 28 | Active
Joseph RAD | SUSE Linux Enterprise v10 SP2 | 129.33.195.147 | 39 Days | 2009 12 21 | Active
Joseph RQM | Redhat Enterprise Linux (32-bit) v5.4 | 129.33.195.186 | 8 Days | 2010 1 21 | Active
Joseph's RSA | SUSE Linux Enterprise v10 SP2 | 129.33.194.160 | 23 Days | 2010 1 6 | Active
簡單易用的界面，讓使用者輕鬆駕馭雲端服務
Joseph RAD [Change name]
Expires: 2010-02-10 12 Days [Extend]
Reboot instance
Delete instance
Create image
OS: SUSE Linux Enterprise v10 SP2
IP: 129.33.195.147
Size: MEDIUM
Hostname: vm324.developer.ihost.com
Image: Rational Application Developer
Storage: Not available
Access:
→ Generate key pair
→ Instructions
Instance tags:
Add Tag
Type | Notifications | Date
Instance save failed | 2010-01-18 12:18
Instance save requested | 2010-01-18 12:14
Instance active | 2010-01-17 09:24
Instance starting | 2010-01-17 09:24
Getting Started
Connect to Your Instance
Use a FreeNX client to connect to the image
Login as dsktop, password passw0rd
Demonstration Guide
Image Details
Rational Application Developer v7.5.2 with local(embedded) WebSphere Application Server (v7.0.0.3) Test Environment + Service Component Architecture Feature Pack and Web2.0 Feature Pack
On provision, use FreeNX client to access the desktop (user: dsktop, password: passw0rd)
For instructions, see the asset Instructions for the IBM Software Delivery Services for the Cloud
More about Rational Application Developer
Discuss this image

Add new Instance

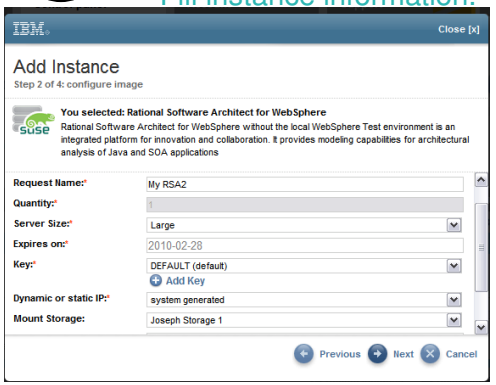
1 Select an image to provision.



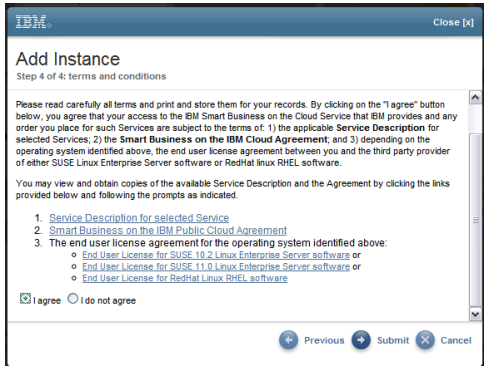
化繁爲簡的步驟，讓開發團隊生產力完全暴發

詳細的Rational 雲端產品請見**最後2頁**

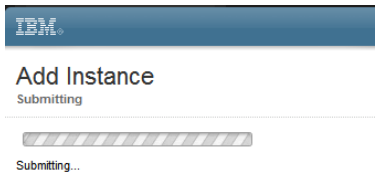
2 Fill instance information.



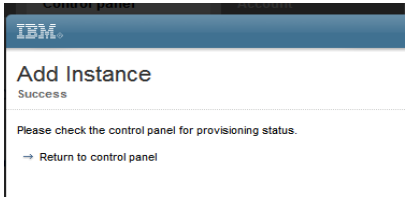
3 Confirm license Agreement.



4 Creating instance.

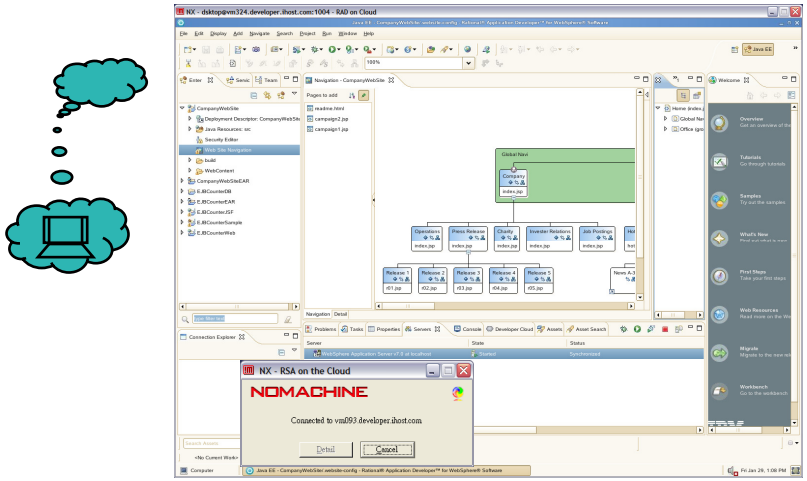


5 Done.

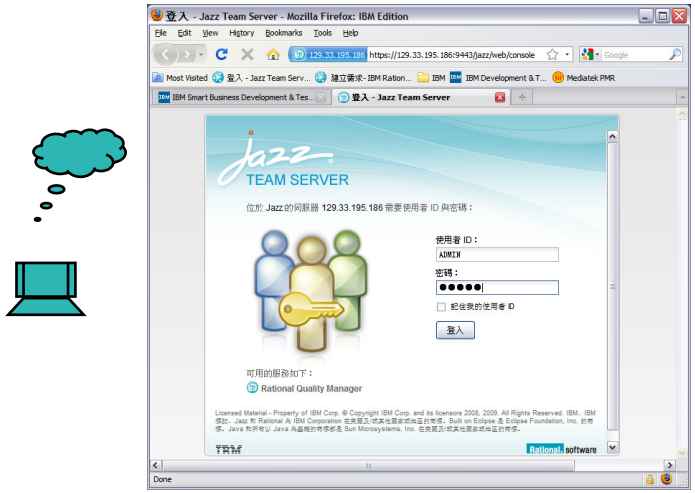


Connect to Your Image

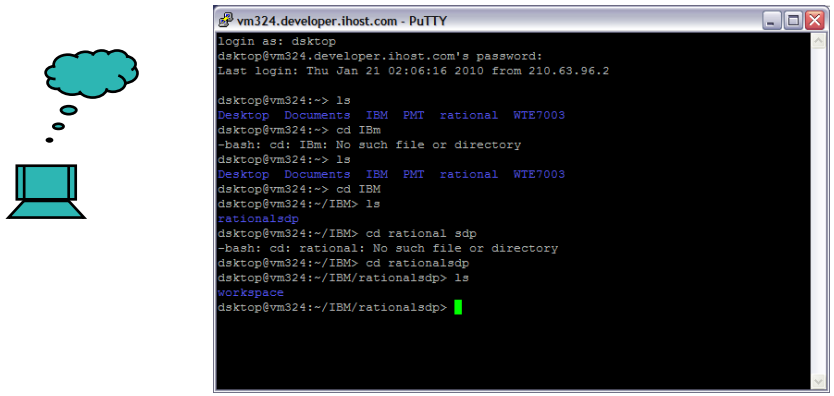
Use NoMachine to connect desktop applications.



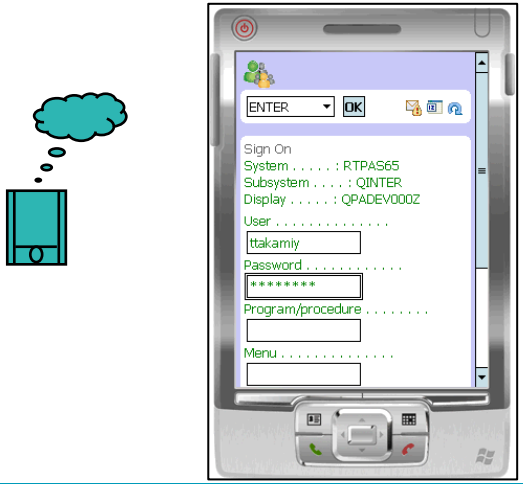
Use Brower to connect applications on the cloud.



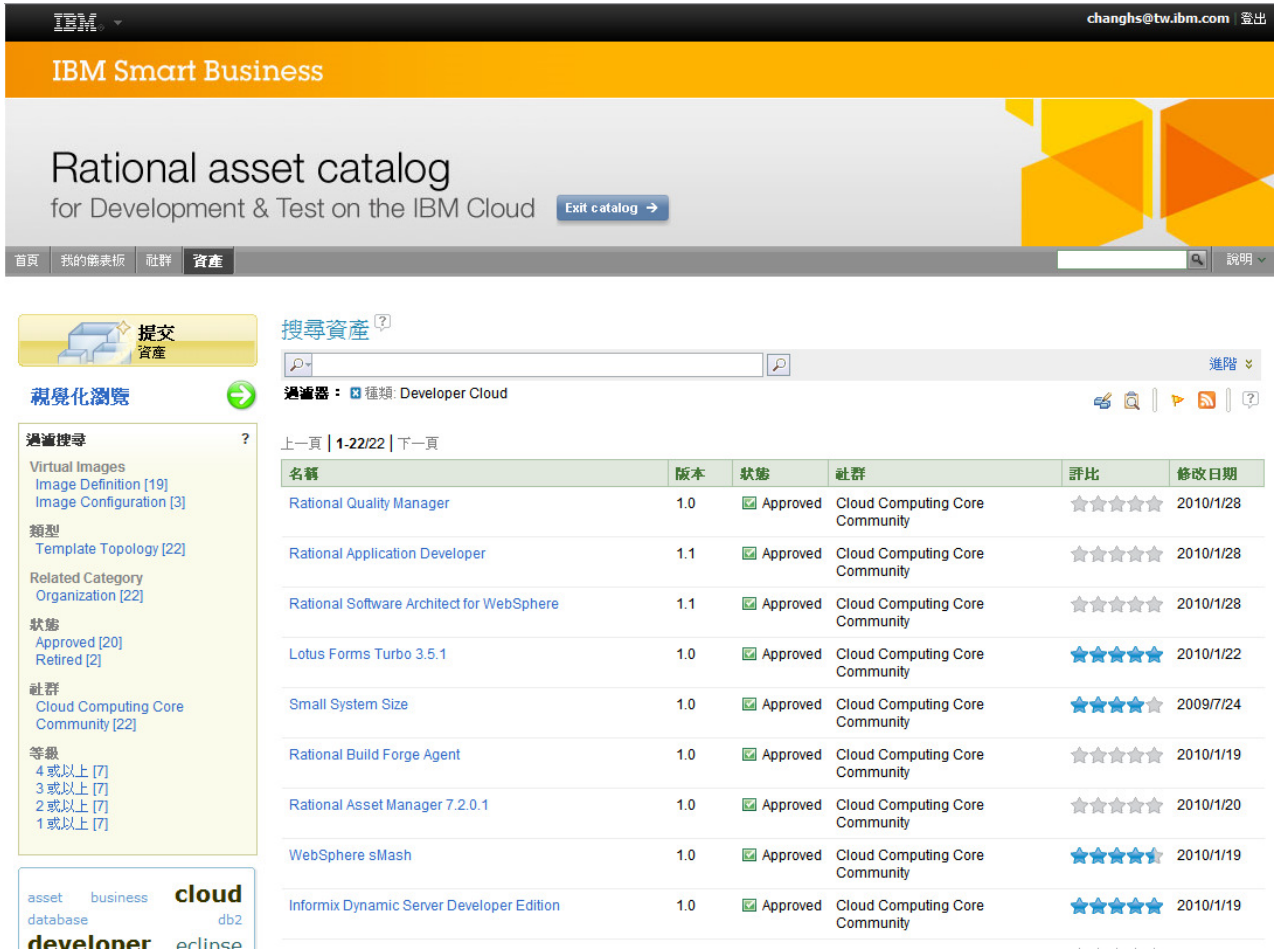
Use Putty to connect servers on the cloud.



Use Mobile Phone to connect applications on the cloud.

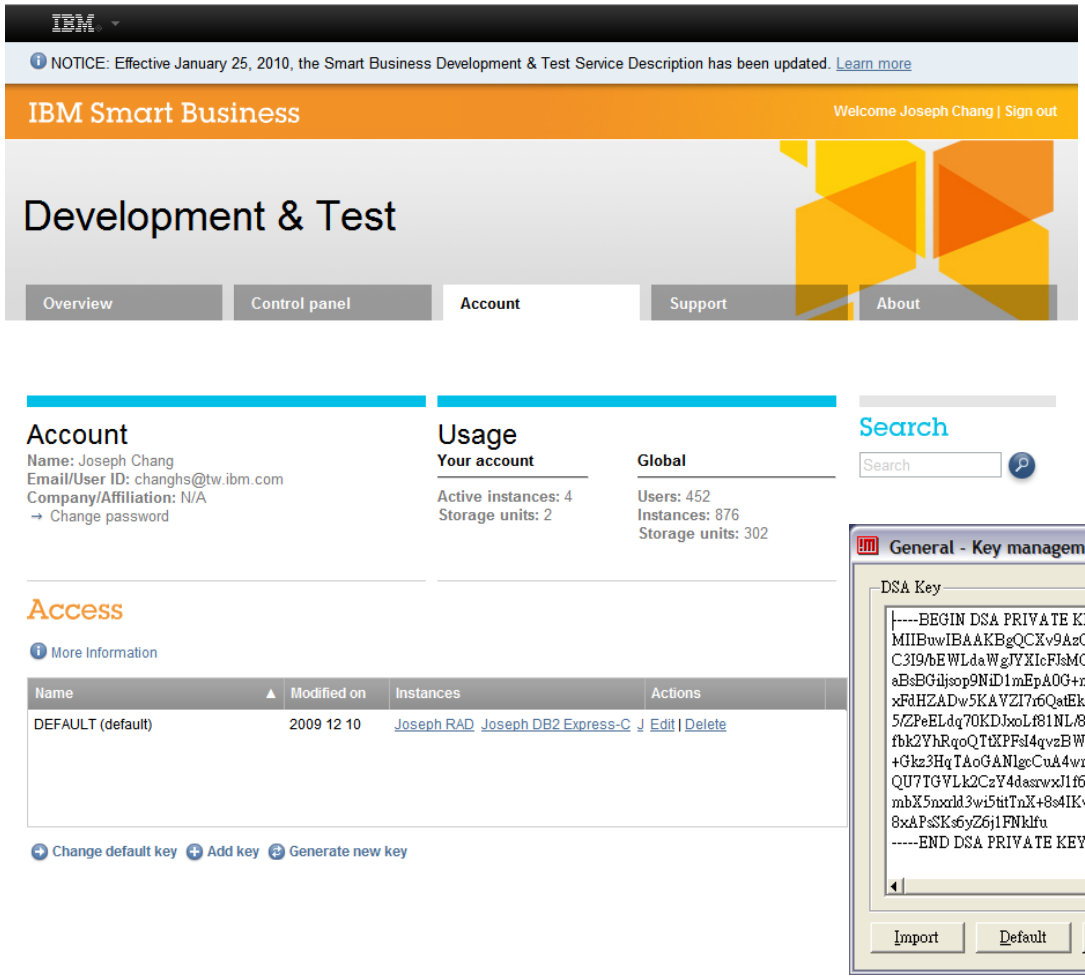


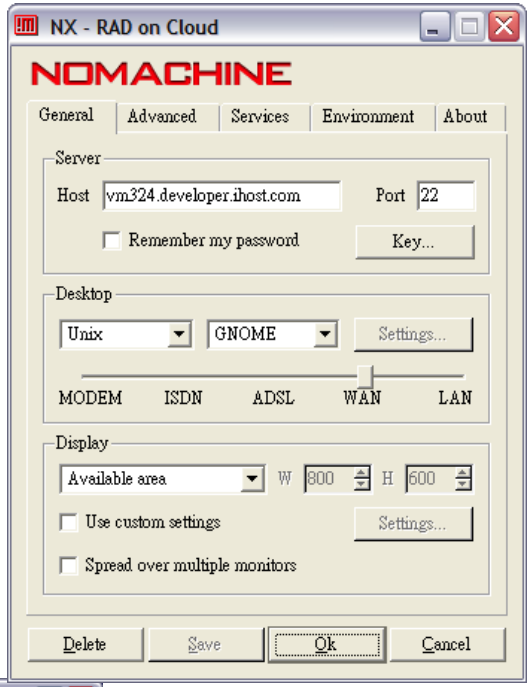
Manage Image with RAM
(軟體上架、改版、再上架)

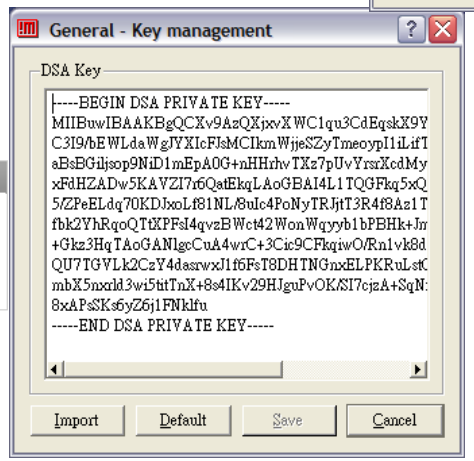


Security

IBM Smart business Development & Test Cloud provides security access control to your image.

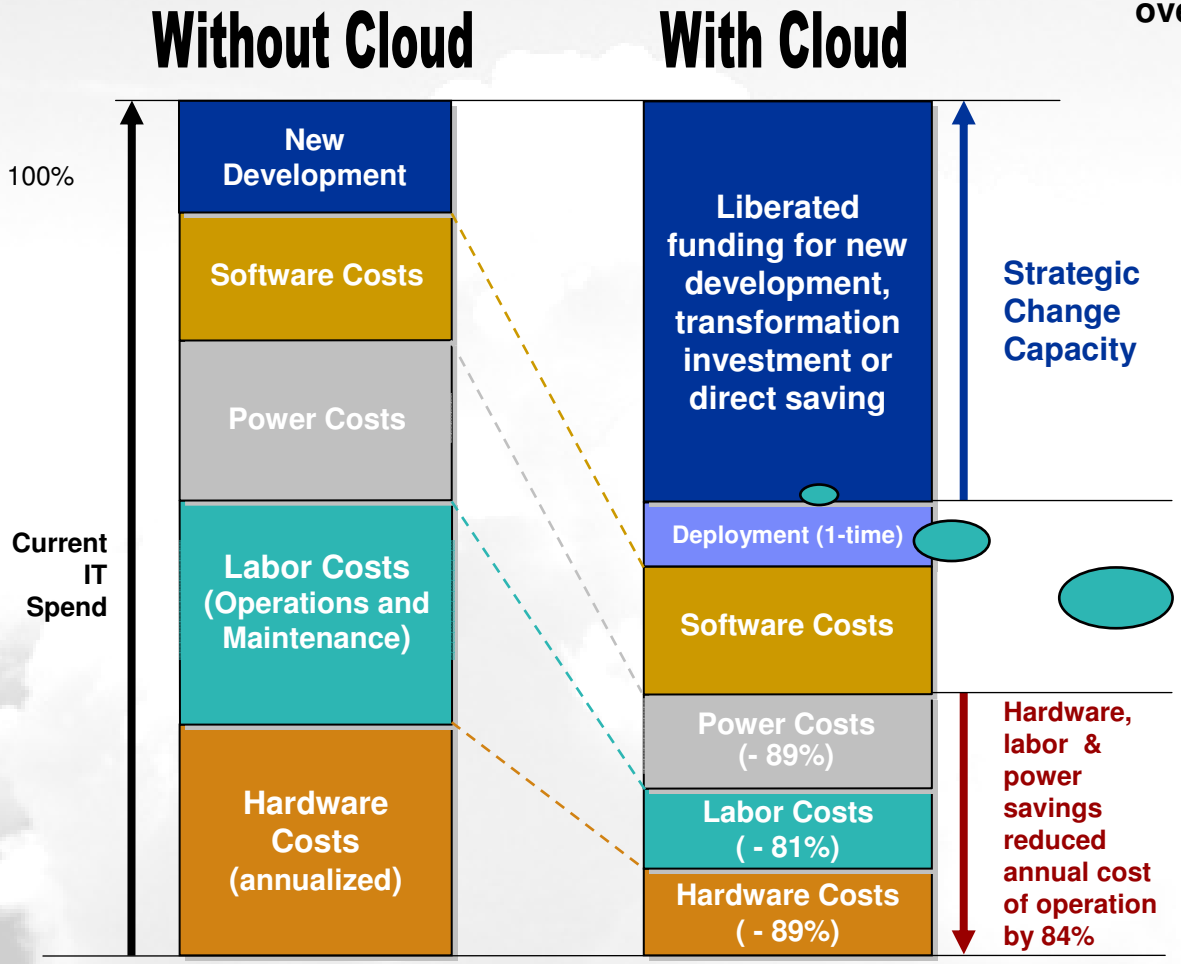






Benefits of Cloud Exploitation

Based on IBM's Technology Adoption Program (TAP)



This "collaboration innovation cloud" has over 80,000 participants within IBM working together to develop new innovations

Reduced Capital Expenditure

Reduced Operations Expenditure

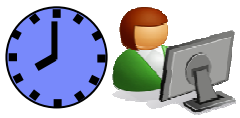
Additional Benefits

Reduced risk, less idle time, more efficient use of energy, acceleration of innovation projects, enhanced customer service

IBM Cloud Computing Offerings

Developer & Tester Cloud

- Create Project Team Environment in 10 mins



1. User logs in the developer cloud through the cloud logging portal.

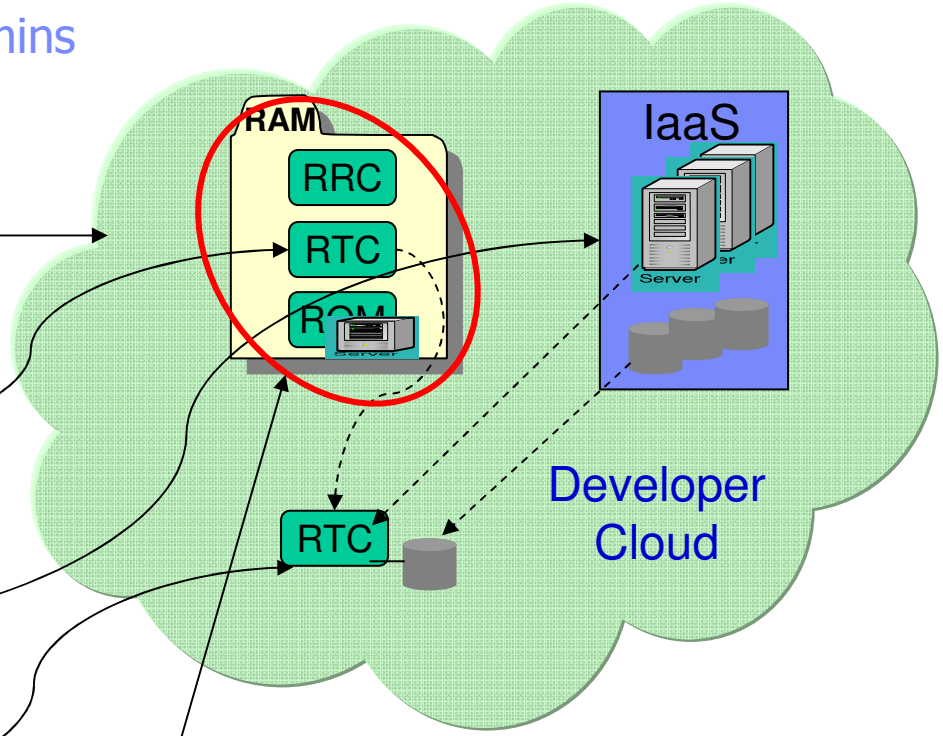
2. User selects the virtual image for the tool required in the RAM catalog and agrees with T&Cs

3. User selects and rents the server and storage required for the service based on his/her needs

4. User requests the provisioning of the selected tool on the selected HW in the cloud

5. User can use tools to simplify, automate and govern software delivery for his development team

6. When service is completed, user deprovisions the service, returning the HW for other users



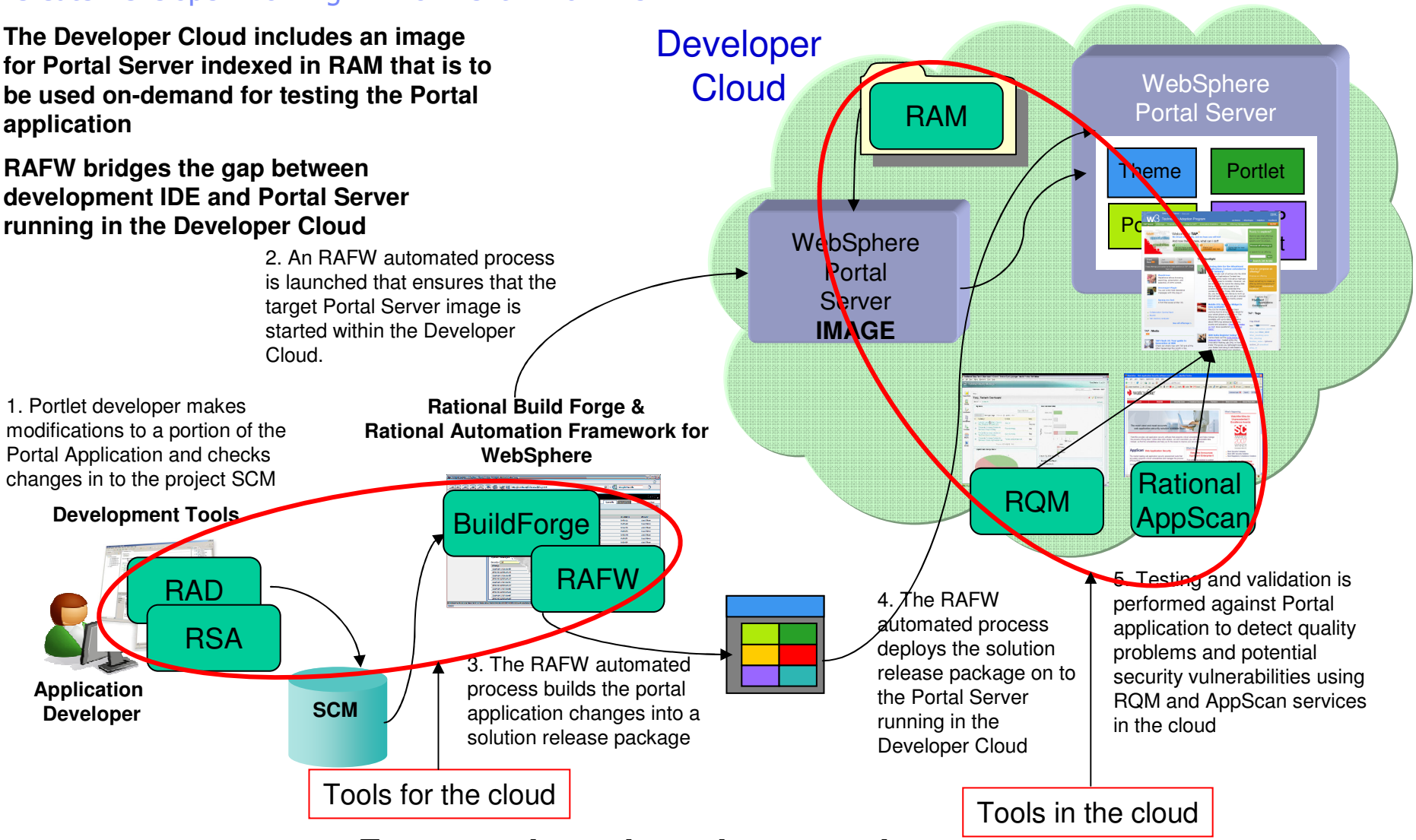
Instant Access

Best Practices encapsulated in the virtual image

Developer &Tester Cloud

-- Create Developer Working Environment in 10 mins

- **The Developer Cloud includes an image for Portal Server indexed in RAM that is to be used on-demand for testing the Portal application**
- **RAFW bridges the gap between development IDE and Portal Server running in the Developer Cloud**



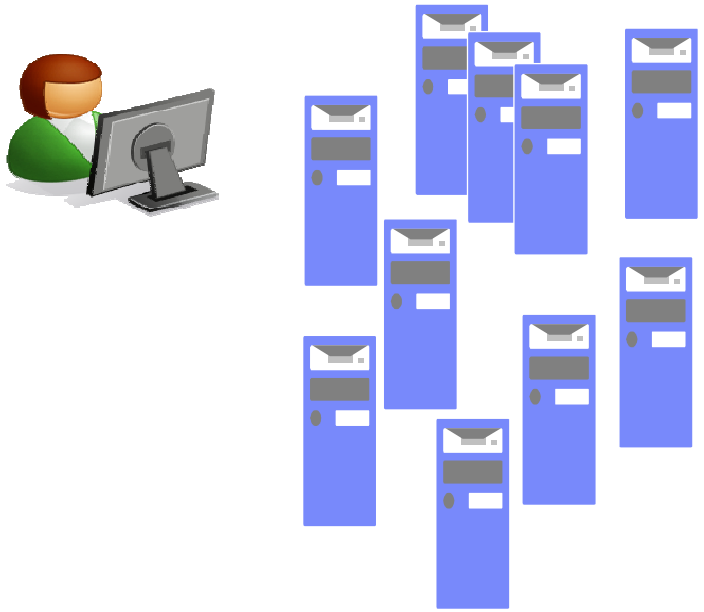
From weeks to less than one day….

Making current test environments more productive, agile and dynamic

Current typical test environment with large number of test servers, little virtualization, and primarily manual allocation and configuration of individual test environments

Current

設備太貴不夠用，環境設定繁複➔測試備工減料



Manual Scheduling, Provisioning & Configuration

To Be

虛擬設備，一次設定 ，自動化流程➔ 高品質軟體

Automated Request Driven Scheduling, Provisioning & Configuration of HW, OS, Middleware and Apps. Automated Tracking, Monitoring and De-provisioning.
Virtualization Management, Capacity, and Image Management

Capital & Operational Expense Reduction, Defect Reduction, Increased Productivity & Innovation

Reduce Software Delivery Costs through Clouds

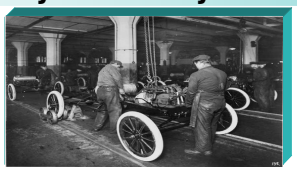
Dynamically obtain and use IT resources from the Cloud to execute automated software development tasks

1. Extract Source Code
2. Code Review
3. Build Source Code
4. Function Test
5. Security Vulnerability Analysis
6. Policy Compliance Test
7. Deploy Build Results

Manual

Pre-1900 assembly
Highly skilled craftsmen manually building the entire product with custom parts

Early Assembly Line



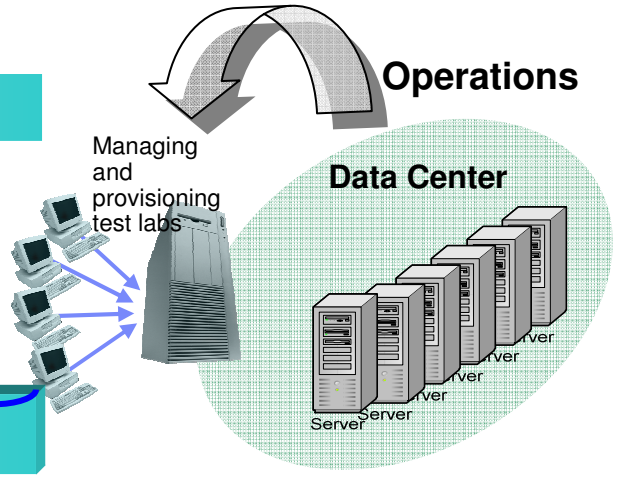
Early assembly line
Skilled workers assembling pieces of parts to build a finished product

Modern Factory

Modern factory
Highly automated with diverse and geographically distributed workforce using a global supply chain

Software development today

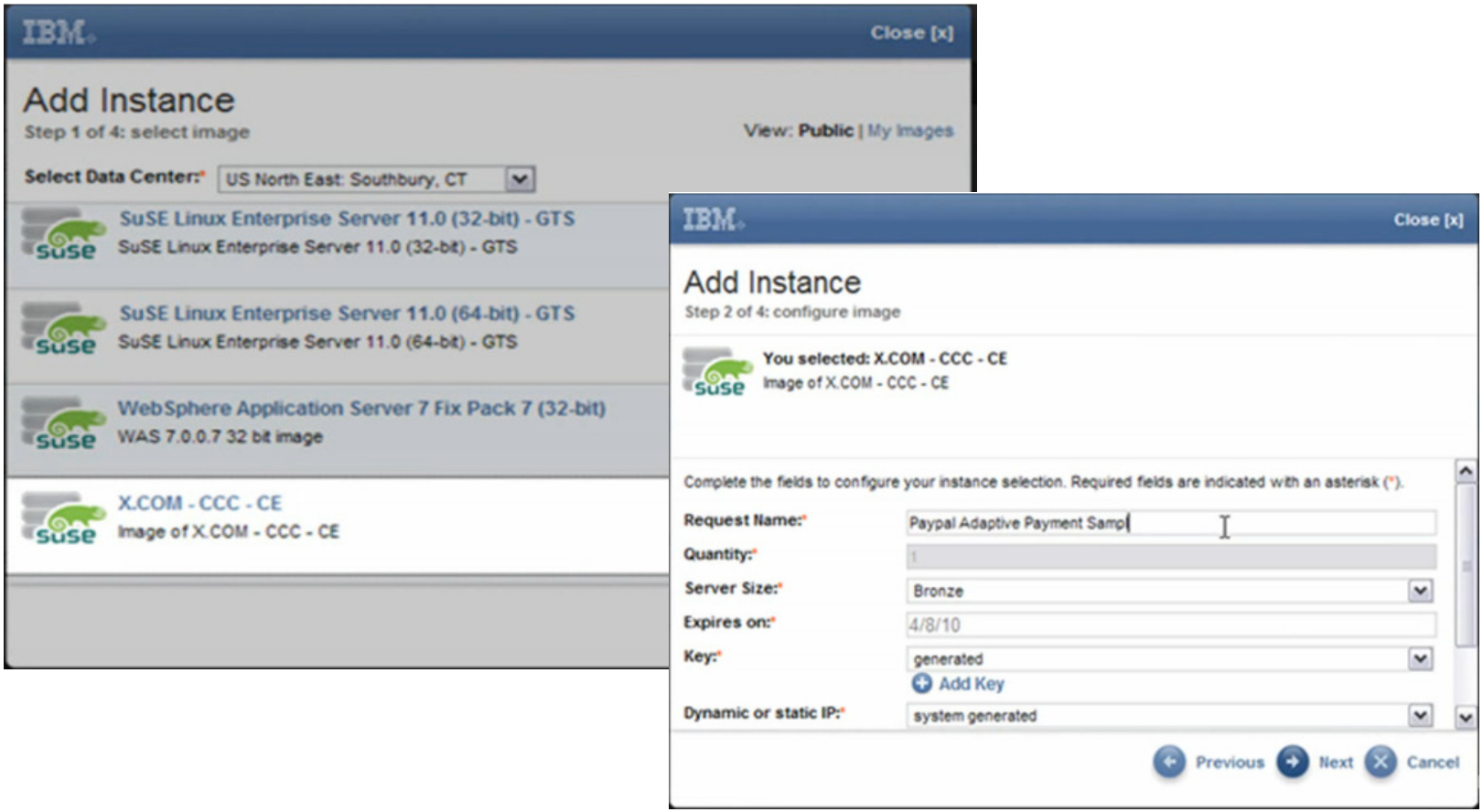
Can we be more like this?



Create PayPal Application

-- with IBM Smart Business Developer and Test Cloud

- Step 1 選取X.COM 開發桌面, 填寫請求表格

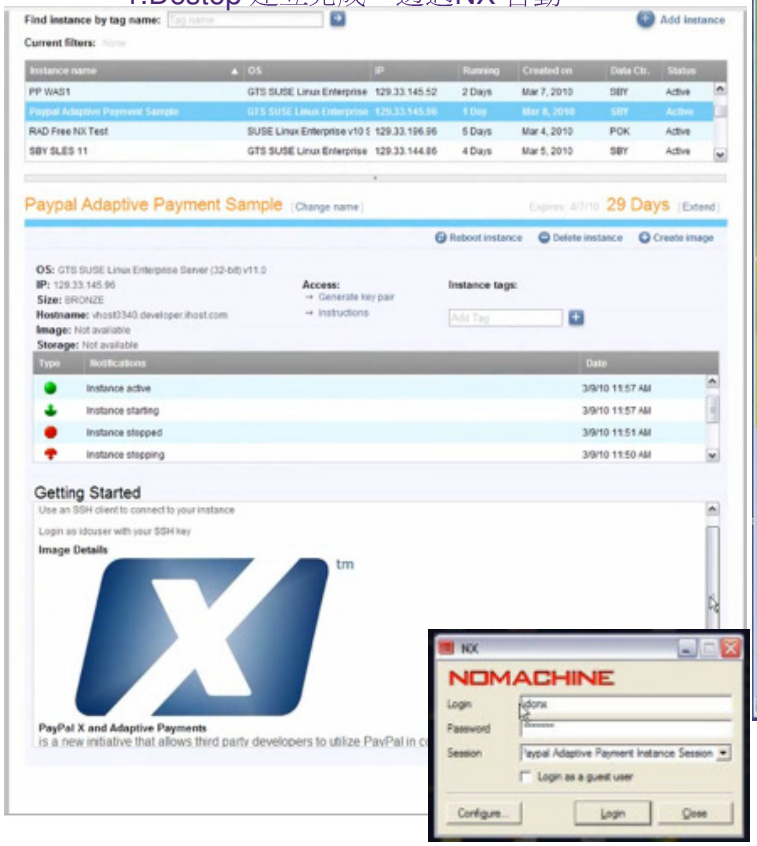


Create PayPal Application

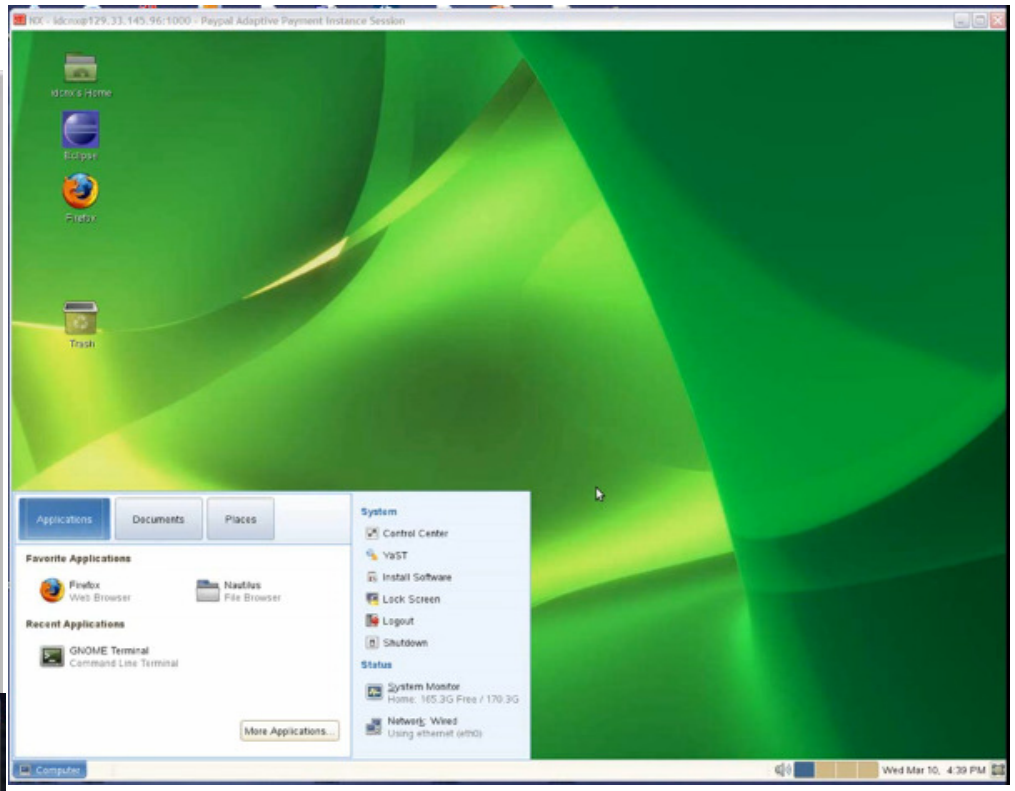
-- with IBM Smart Business Developer and Test Cloud

- Step 2 依指示 啓動X.COM 開發桌面

1.Destop 建立完成，透過NX 啓動



2. 啓動後的桌面

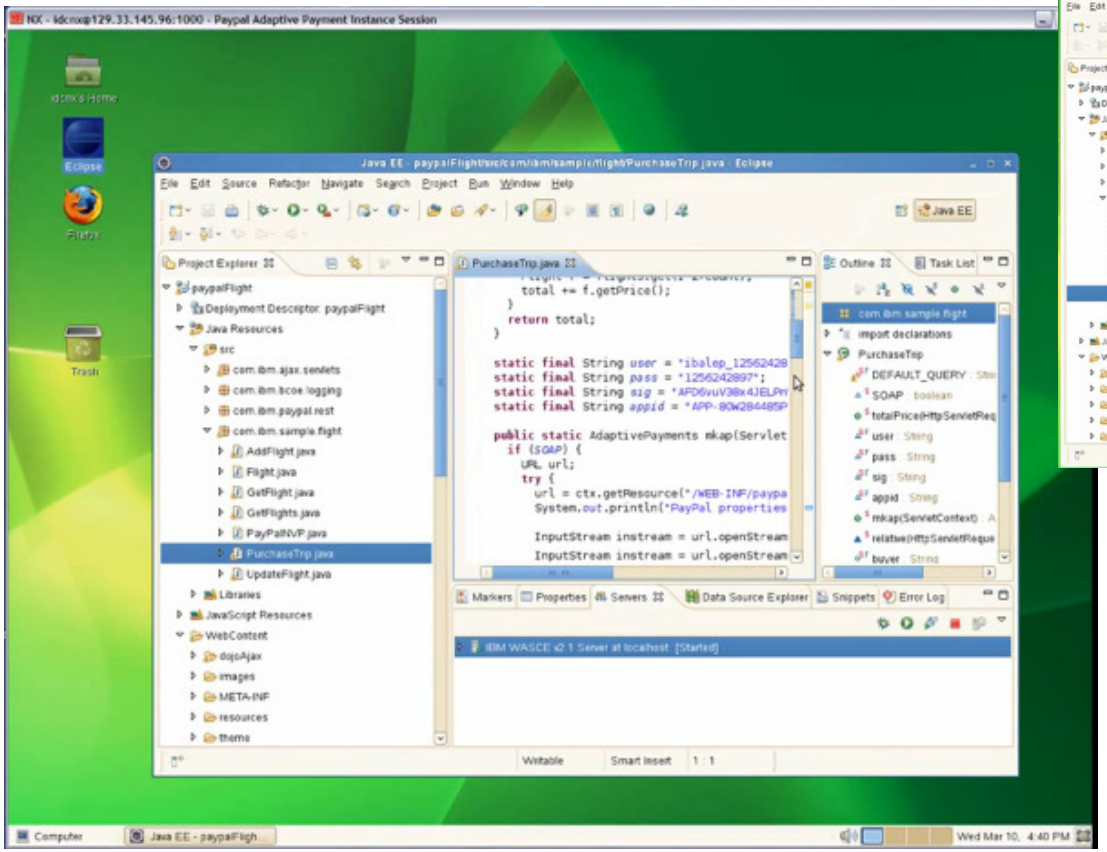


Create PayPal Application

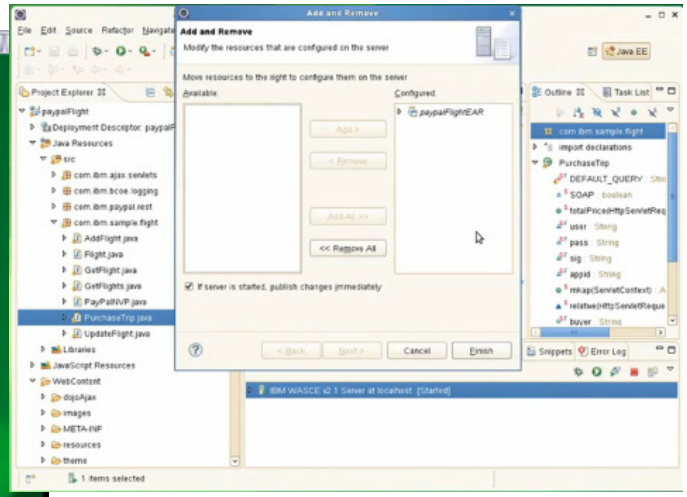
-- with IBM Smart Business Developer and Test Cloud

- Step 3 啓動PayPal Application 開發工具

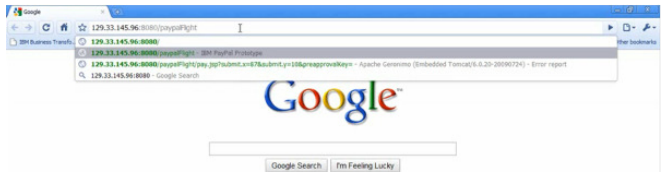
1.啓動 Eclipse. PayPal SDK, 範例程式階在裡面



2.部署應用程式，AP Server 當然也在雲端



3 .連線到應用程式(手機模擬器)



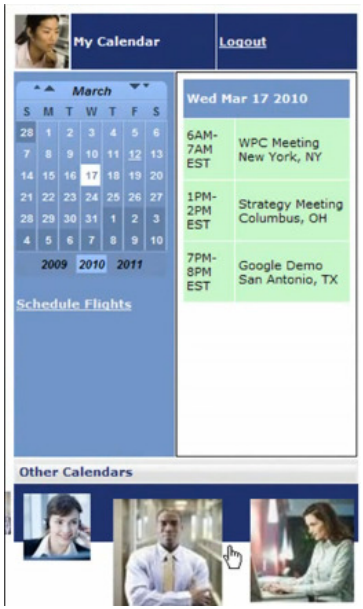
Create PayPal Application

-- with IBM Smart Business Developer and Test Cloud

- Step 4 測試應用程式執行

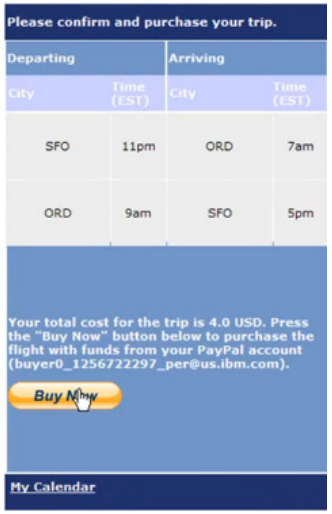
1.啓動手機Calendar

2.選擇出發日期

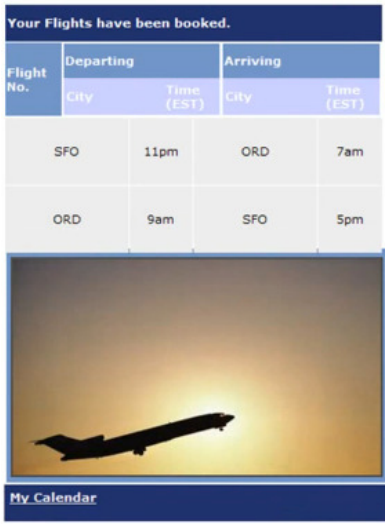


3.選擇航班

4. Place Order



5. 完成



Go to IBM

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