ibm.com/db2/labchats

Data Management

Leverage Cloud Computing to Accelerate Development and Test

In Collaboration between IBM and RightScale.

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> Executive's Message

Sal Vella

Vice President, Development,
Distributed Data Servers and Data Warehousing

IBM

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> Featured Speakers

Leon Katsnelson

Program Director,
IM Cloud Computing and Emerging Technologies

IBM

Uri Budnik

Director,
ISV Partner Program

RightScale

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What is Cloud Computing

- **Cloud computing is both a user experience and a business model.**
- **It is an emerging style of computing in which applications, data and IT resources are provided to users as services delivered over the network.**
- **It enables self-service, economies of scale and flexible sourcing options.**

- **It is hottest topic in IT and top of mind for IT executives**

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Gartner Identifies Seven Major Projects CIOs Should Consider During the Next Three Years

"**Cloud Computing- By 2016, all Global 2000 companies will use public cloud services.**

Cloud computing represents a shift in the relationship between the providers and consumers of IT-based solutions. It constitutes the basis of a discontinuity that amounts to a new opportunity to shape the relationship between those who use IT services and those who sell them. Gartner said worldwide cloud services revenue (including public and private services) is forecast to reach $148.8 billion in 2014."

Source: Gartner Press Release http://www.gartner.com/it/page.jsp?id=1465614

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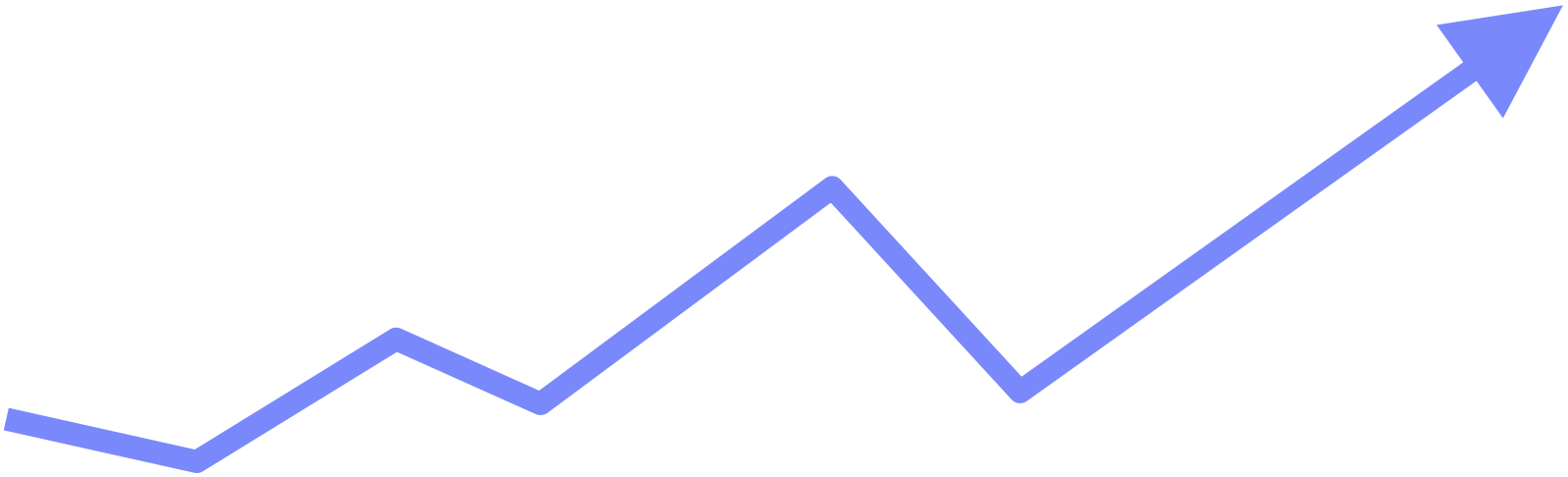
Cloud: Growing 7X faster than traditional IT

- **Cloud spending = CAGR of 22% through 2015**
- **Traditional IT spending = CAGR of >4%**
- **Cloud spending = >9% of total IT spend by 2015**
- **Cloud growth rate = 7X that of traditional IT spending**
- **Spending on apps, app dev./deploy, SW, storage, servers**



Source: IBM estimates, April 19, 2010; QMV2Q10 & IDC March 2010

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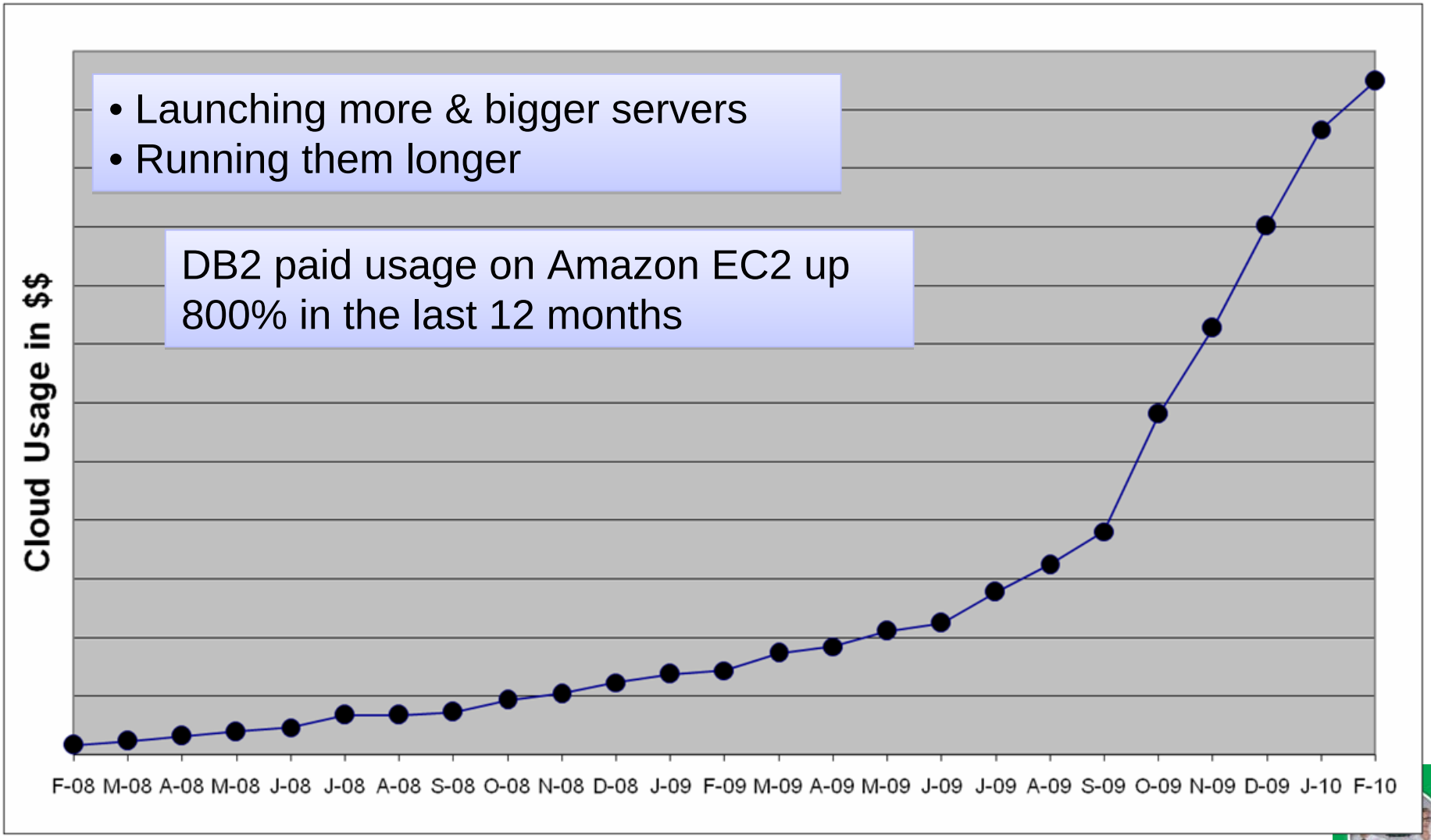
Real World: Usage Up 1000%



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What does DB2 have to offer?

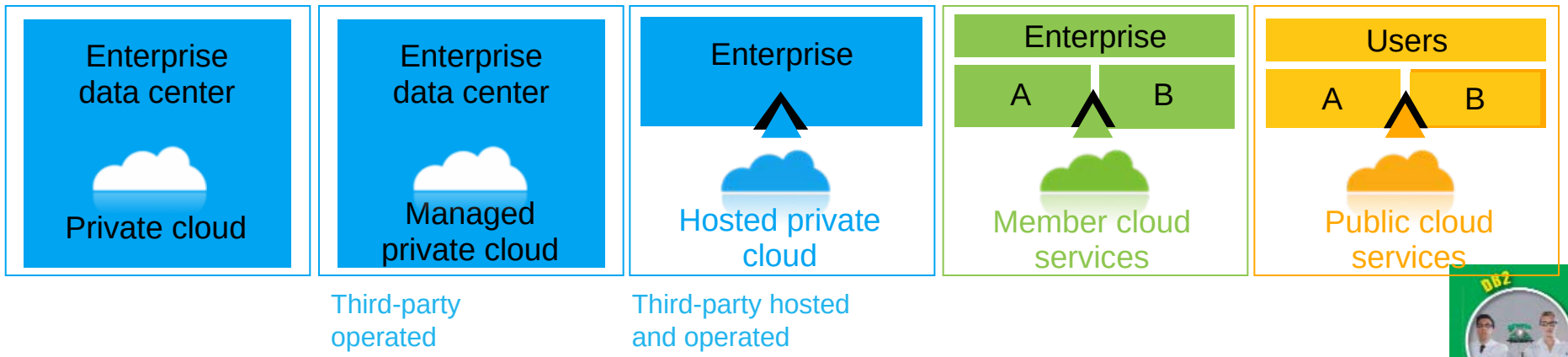
Private Hybrid Public

Available Now:
- DB2 for WebSphere CloudBurst Appliance
- DB2 Templates on RightScale.com
- Dev & Test Solution Pack on RightScale

Technology Preview
- BigInsight (Hadoop)
- Database as a Service (DBaaS)

Amazon:
- DB2 AMIs
- DB2 Templates on RightScale.com
- Dev & Test Solution Pack on RightScale
- Industry AMIs (include DB2)
- DB2 Ubuntu AMIs by Canonical

IBM Development & Test Cloud
- DB2 Enterprise Developer Edition (pay)
- DB2 Express-C (free)



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Choose to maximize ROI and minimize risk

DEVELOPMENT AND TEST – IDEALIZED WORKLOAD FOR THE CLOUD

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Lifecycle Challenges

- **Limited, shared resources**
- **Lead time for procuring and provisioning equipment**
- **Maintaining consistent environments throughout the lifecycle**
- **Maintaining multiple environments in parallel**
- **Distributed teams and team members**

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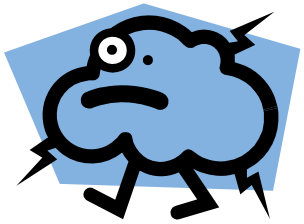
Typical Testing Environments* challenges / observations



- **30% to 50% of all Servers within a typical IT environment are dedicated to Test**
- **Most Test Servers run at less than 10% utilization, if they are running at all!**
- **IT staff report a top challenge is finding available resources to perform tests in order to move new applications into production**
- **30% of all defects are caused by wrongly configured environments in test**
- **Testing backlog is often very long and single largest factor in the delay new application deployments**
- **Test environments are seen as expensive and providing little real business value**

** "Industry Developments and Models – Global Testing Services: Coming of Age," IDC, 2008 and IBM Internal Reports*

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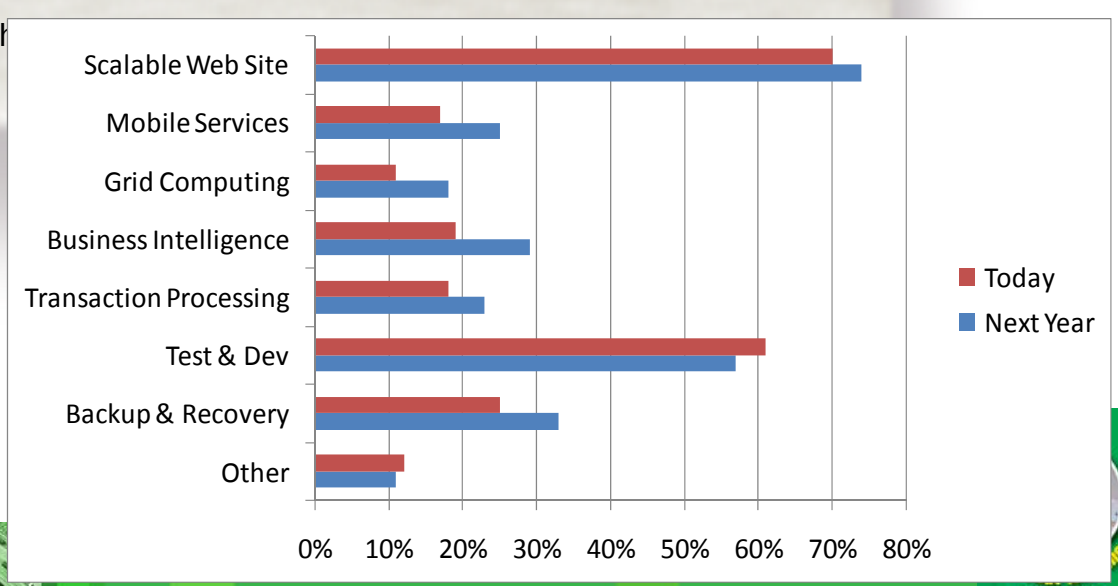
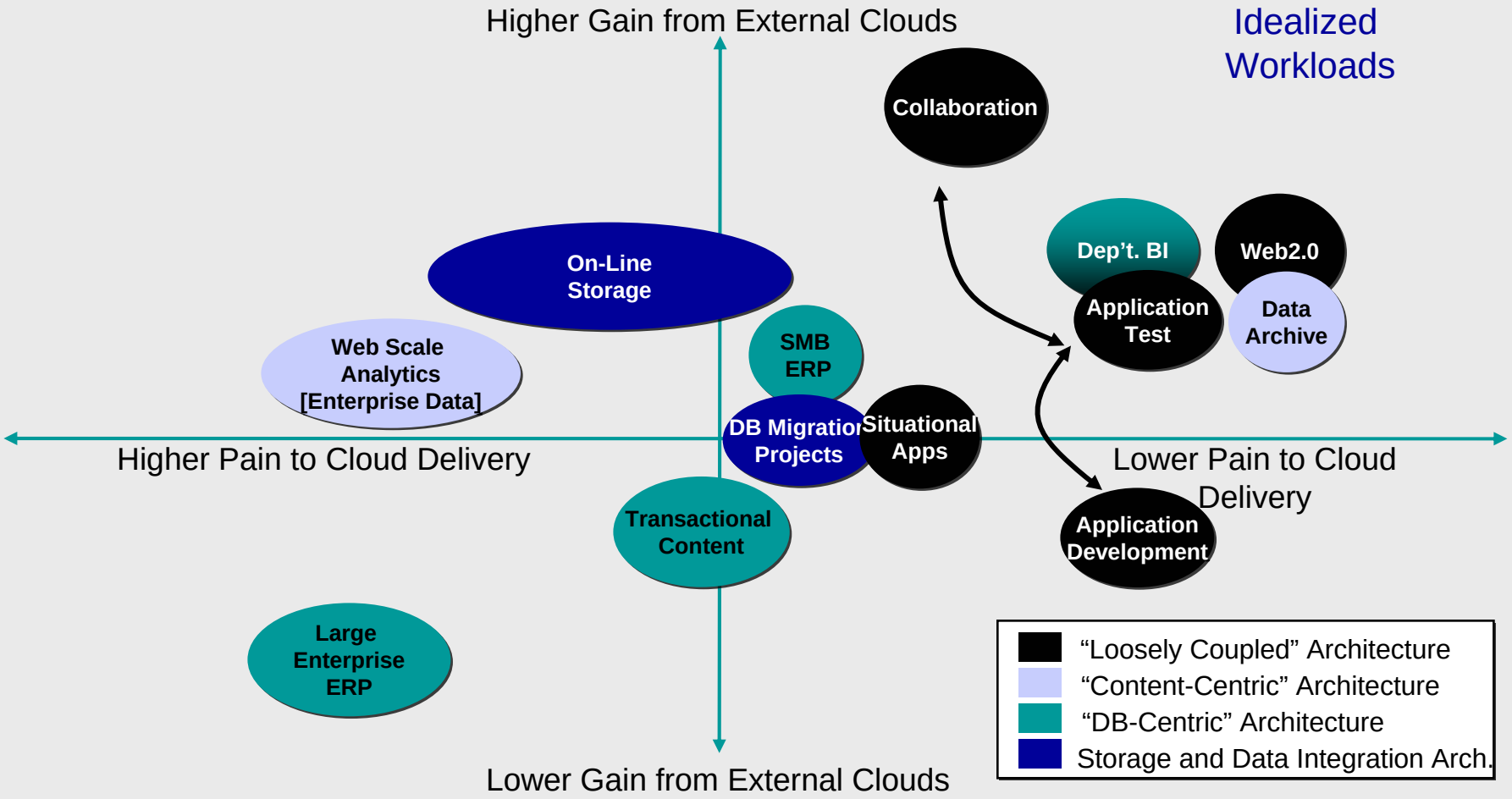
Development and Test Environments: Top workload for Cloud

"test environment infrastructure" … is a relatively low-risk workload in terms of the business and the overall IT operation. In addition, this workload has the potential for large ROI through gains in speed and cost reduction. Therefore, IBM recommends that test environment infrastructure workloads should be considered a strong candidate for a pilot cloud project in either (private or public) delivery model.

Source: IBM Smart Business Thought Leadersh



Our general findings are some workloads are better suited for cloud than other workloads



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Making it more real …

DB2 DEVELOPMENT AND TEST ON THE CLOUD

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IBM Development and Test Cloud

Developer, Tester

Developer, Tester

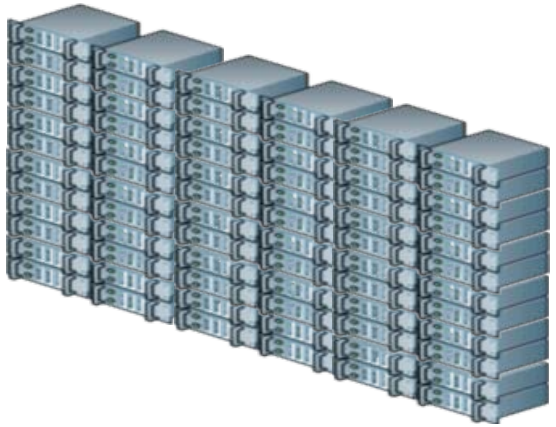
Developer, Tester

Admin

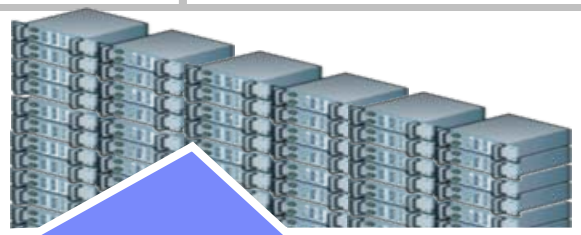
Catalog

- Machine/OS images
- IBM middleware images:
  - DB2, Informix
  - WebSphere
  - Rational
  - Tivoli

IBM US Data Center



IBM European Data Center



Cloud Infrastructure

- Hardware: x86, x64
- OS:
  - Novell SuSe Linux Enterprise Server 11
  - RedHat Enterprise Linux 5.4

Secure Development and Test Environment

Your Data Center

Developer, Tester

Developer, Tester

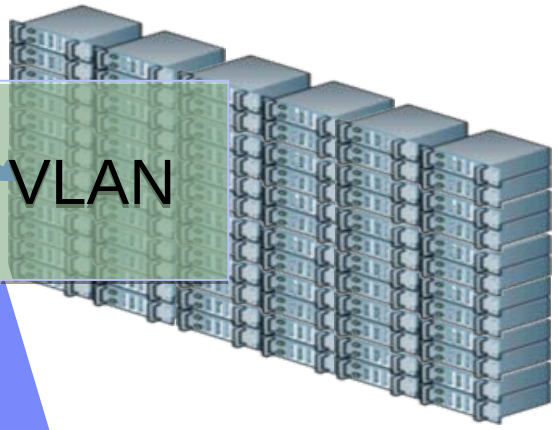
Developer, Tester

Admin

VPN

VLAN

IBM US Data Center



European Data Center

Secure Cloud Infrastructure

- Still using VMs on shared resources
- All access to the system via secure VPN
- All servers on a private VLAN

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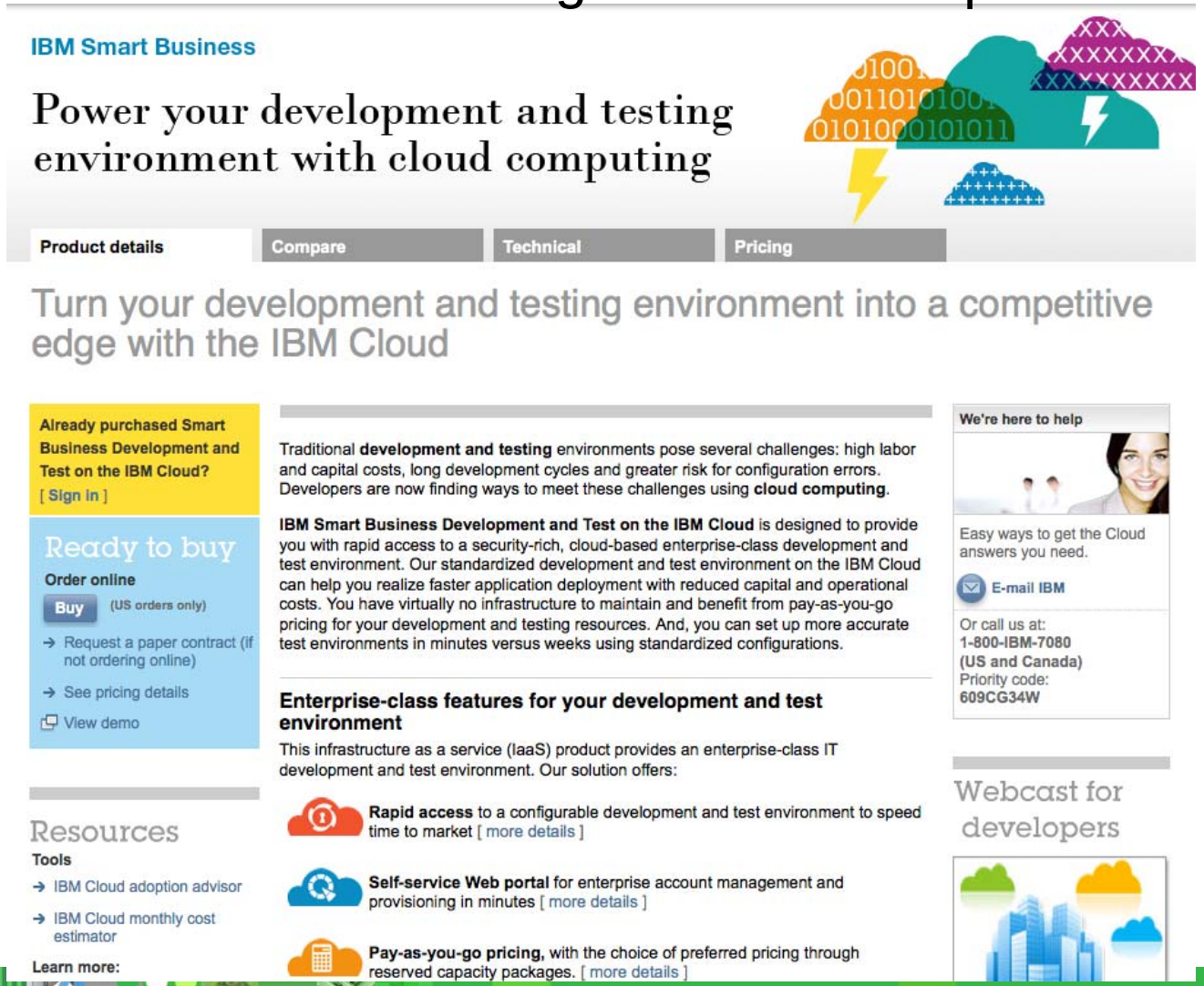
Getting started with Dev and Test on the IBM Cloud

http://www.ibm.com/services/us/igs/cloud-development/



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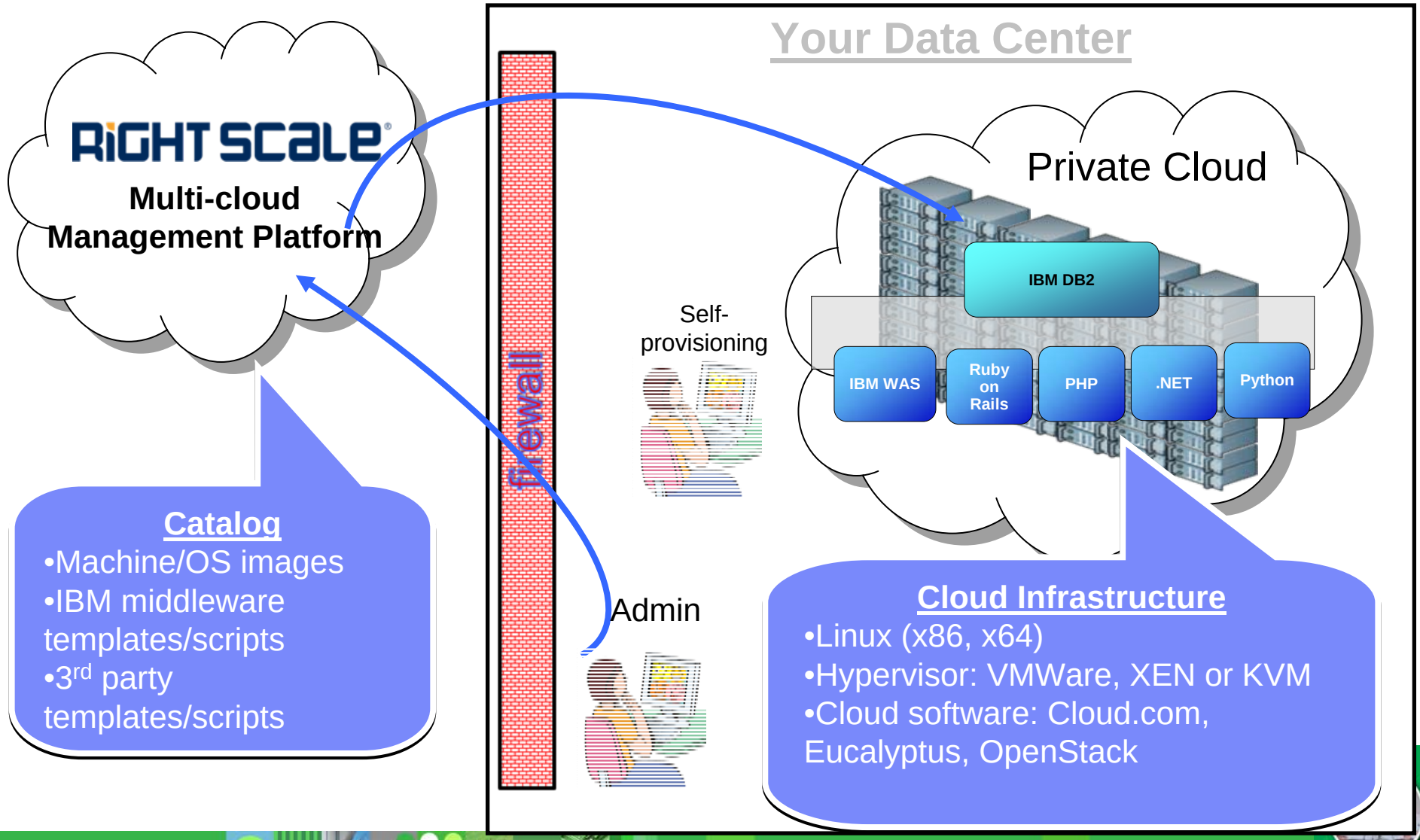
Deploy DB2 in a Private Cloud i.e. in Your Data Center



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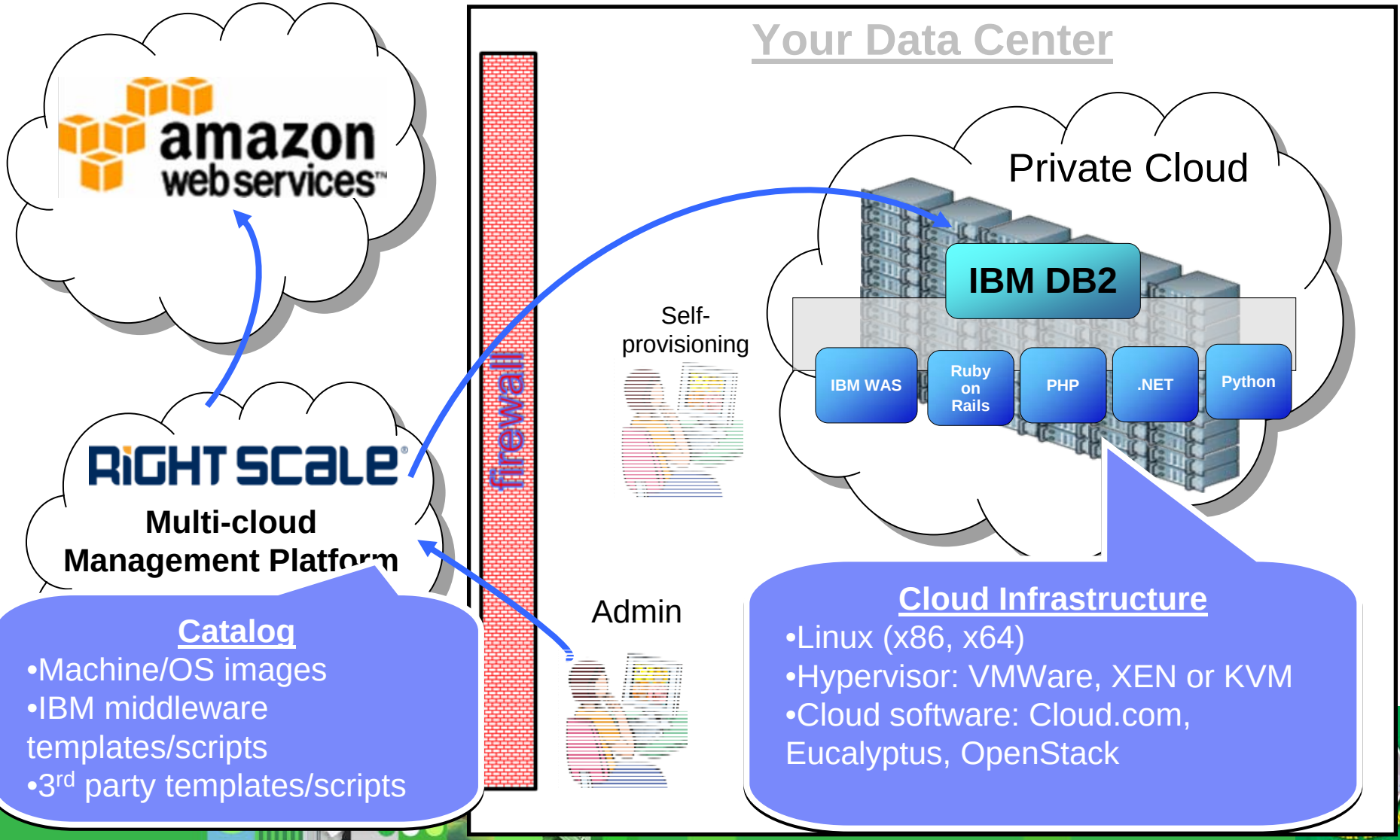
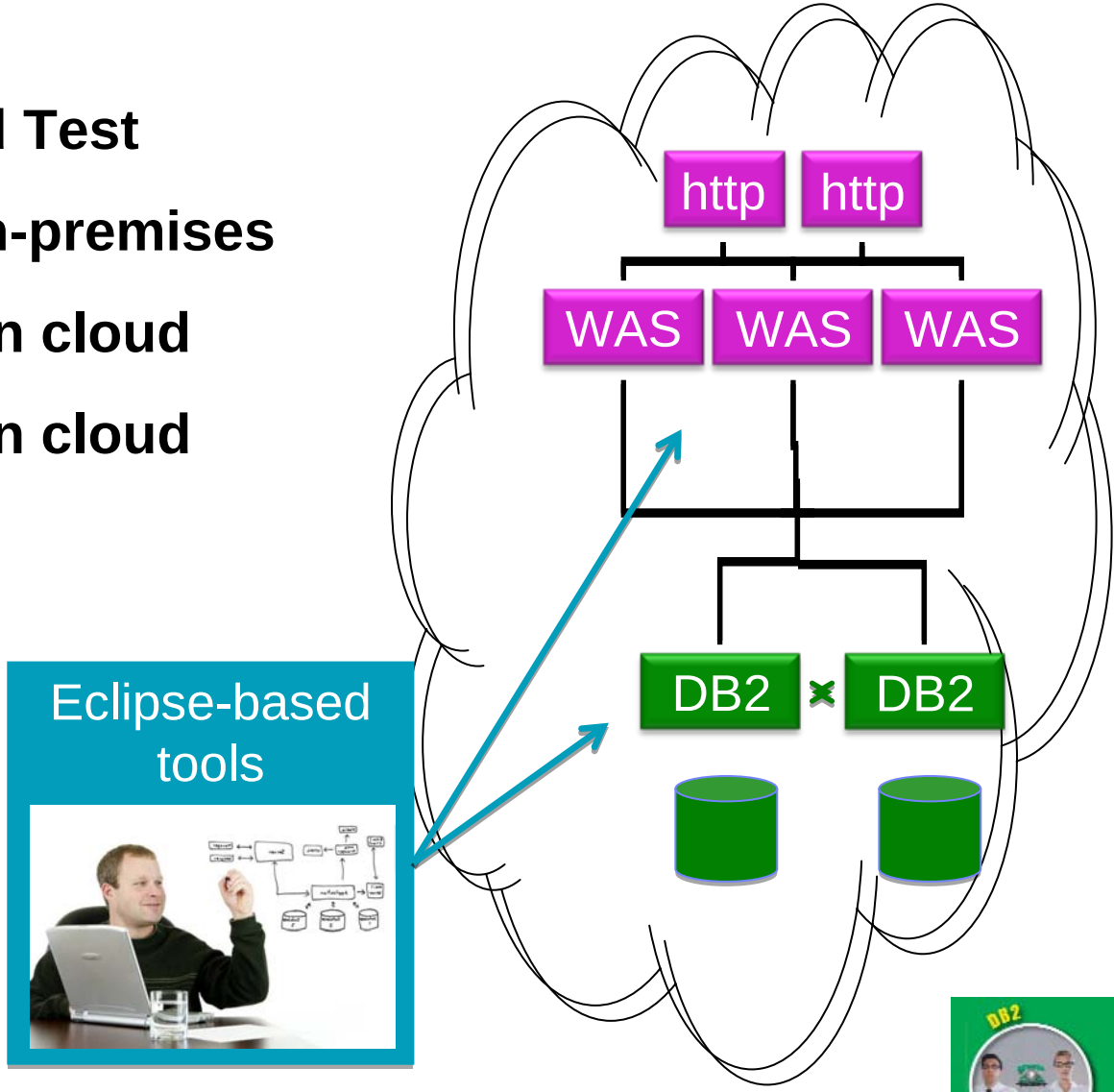
Deploy DB2 in a Hybrid Cloud (Your Data Center and Amazon EC2)



Leveraging Cloud and IBM Middleware

Development and Test

- **Build on cloud deploy on-premises**
- **Build on cloud, deploy on cloud**
- **Build in-house, deploy on cloud**



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Demo

Creating Development and Test Ecosystem

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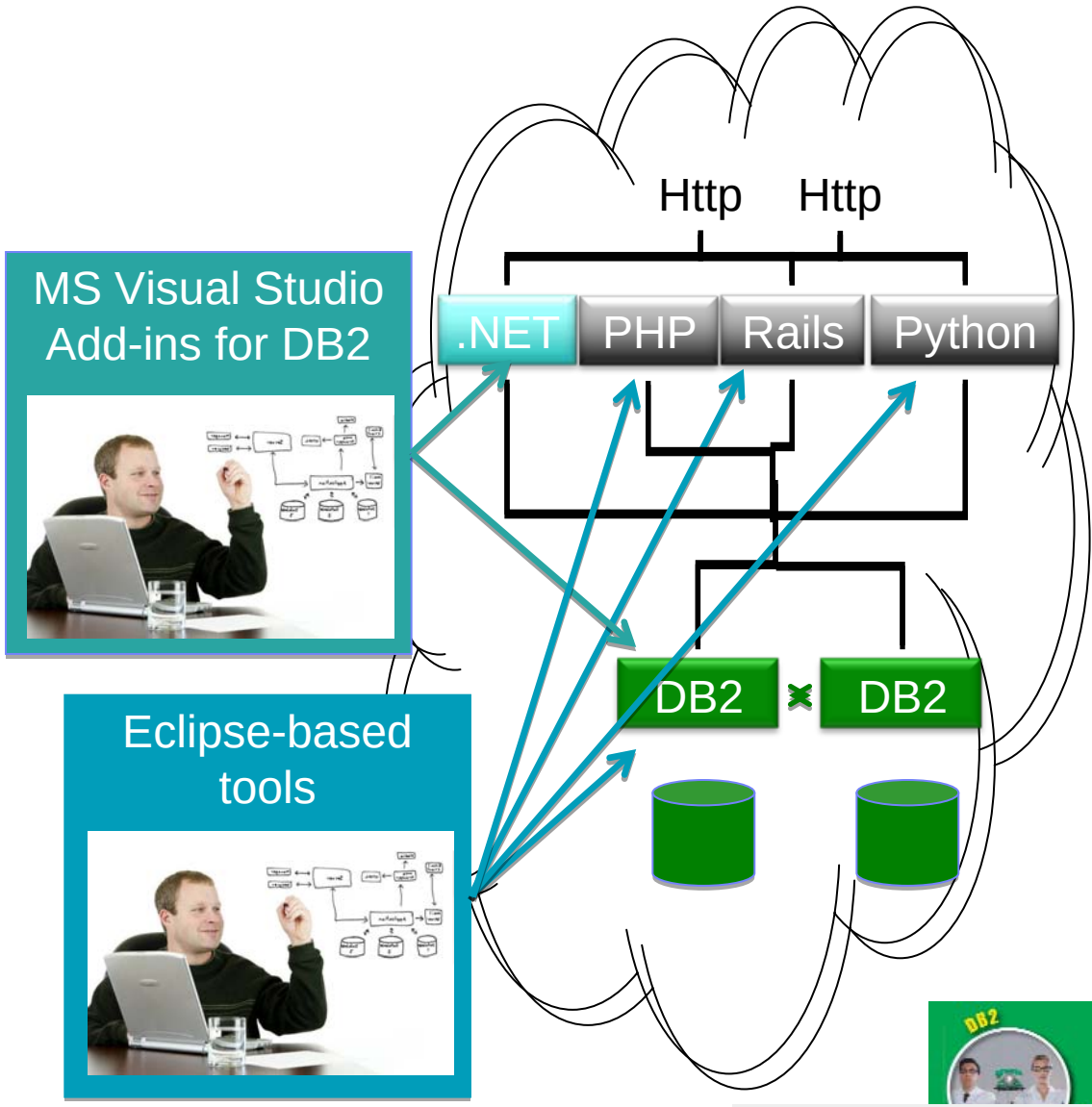
DB2 is not just for Java

.NET, PHP, Python, Ruby on Rails …

•Drivers developed and supported by IBM. Support popular languages/frameworks

•Free tools for developer productivity to build application and database code



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DB2 on RightScale.com
http://support.rightscale.com/27-Partners/IBM_DB2

List of ServerTemplates

NAME	DESCRIPTION
IBM DB2 Express-C 9.7.2 by IBM	This ServerTemplate installs and configures DB2 Express-C 9.7.2 standalone. You have the option of storing your data and configuration using EBS volumes or using volatile local storage.
IBM WAS CE 2.1.1.4 + DB2 Express-C 9.7.2 All-in-one by IBM	This is an All-in-one ServerTemplate combining DB2 Express-C 9.7.2 and Websphere CE 2.1.1.
IBM WAS CE 2.1.1.4 + DB2 Express-C 9.7.2 All-in-one (with Load Balancer) by IBM	This Server Template is identical to the "non-Load Balancer" variety (above) however includes component to connect to a HAPROXY load balancer. Also, this template has the Day Trader demo application installed by default (accessibly via: http://siteurl/daytrader).
Radiant CMS on IBM DB2 Express-C 9.7.1 by IBM	This ServerTemplate sets up Radiant CMS on top of DB2.
IBM DB2 Rails All-in-one by IBM	This ServerTemplate is identical to the IBM DB2 Express-C 9.7.2 IBM ServerTemplate except it includes Rails components configured to work with DB2.

Why RightScale

- **Empower developers and testers with self-service provisioning**
- **While maintaining complete control**
- **Eliminate errors due to misconfigured environments**
- **Agile deployments that embody best practices**

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IBM leveraging the cloud to address our own challenges

DB2 EARLY EXPERIENCE PROGRAM

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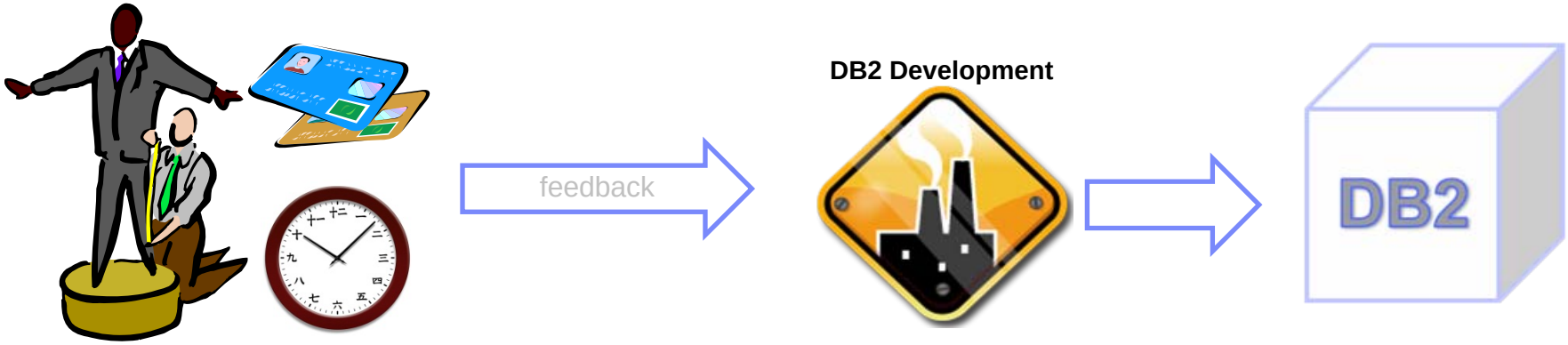
DB2 Early Experience Program on the Cloud



Save money:

- no hardware to procure (or power, cool, fix …)
- as little as $0.34/hour
- pay only for what you use

Save time:

- nothing to install, patch, or configure
- you always use the latest stable code

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A few easy steps

- **Request to participate in the DB2 Early Experience program (email db2beta@ca.ibm.com)**
- **If/when approved, go to http://freedb2.com/db2-early-experience-program-on-the-cloud/**
- **Get your credit card ready, get a cup of coffee and give yourself about 20-30 minutes.**
- **Read the article and watch the videos**
- **Run the macro (explained in the videos)**
- **Start your server and point your web browser to it**
- **Connect to your server via terminal session, CLP, Data Studio, Optim Database Administrator**

Congratulations, you are working with the next version of DB2!

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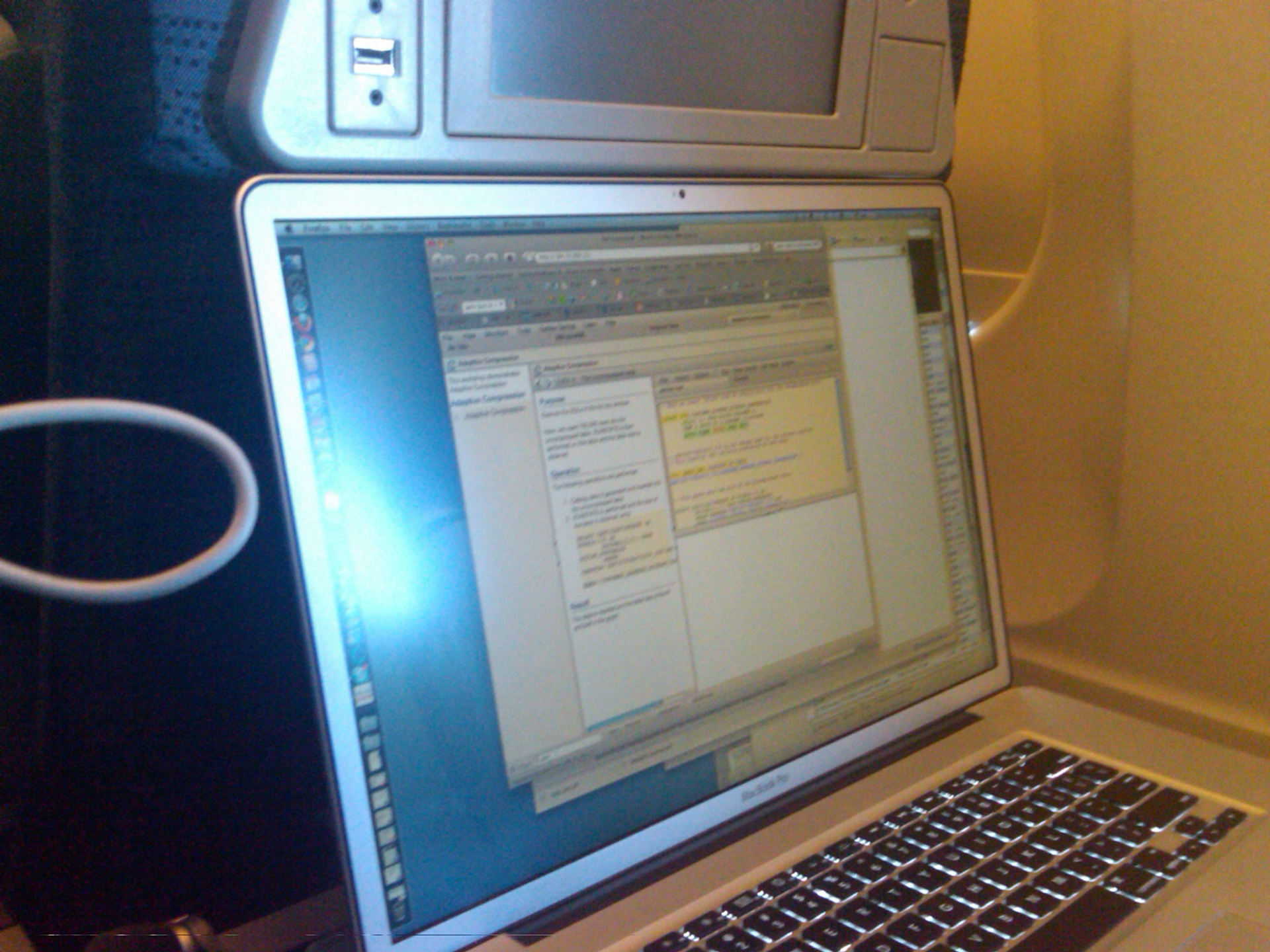

Getting started has never been easier

- **Development and Test is low risk high ROI activity – perfect fit for the cloud**
- **The easiest and the least expensive way to get started is on the public cloud:**
  - Set up an account on IBM Dev and Test Cloud:
    - http://www.ibm.com/services/us/igs/cloud-development/
  - Engage in the DB2 Early Experience Program on the cloud:
    - http://freedb2.com/db2-early-experience-program-on-the-cloud/
  - Open free Amazon EC2 & RightScale.com accounts and take advantage of pre-built DB2 templates:

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> Questions

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Thank You!

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Thank you for attending!

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31