WebSphere Application Infrastructure 家族產品藍圖 與雲端創新技術介紹

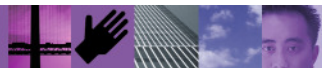*Lilian Wang*

WebSphere Technical Sales Support

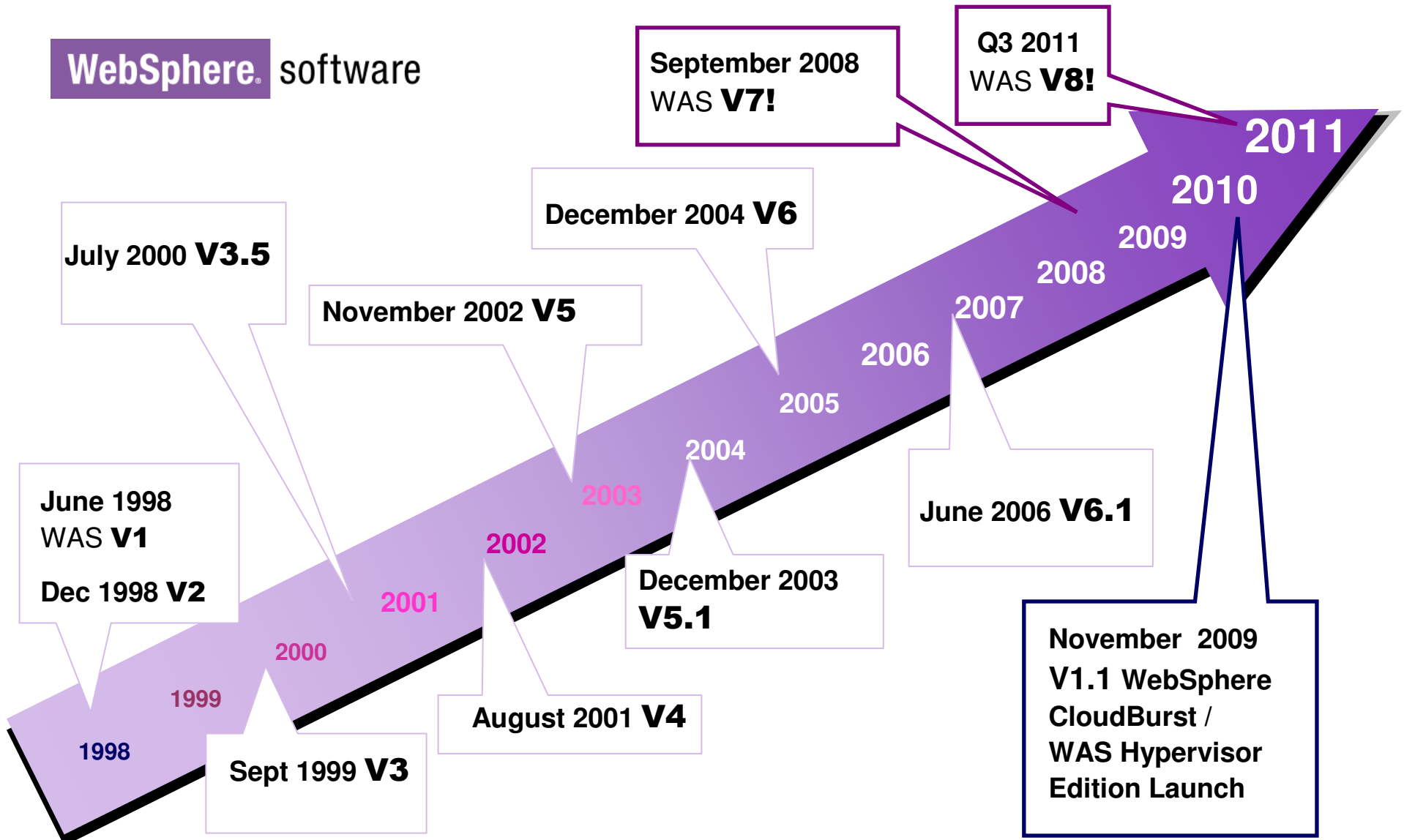*IBM Taiwan Software Group*

WebSphere software
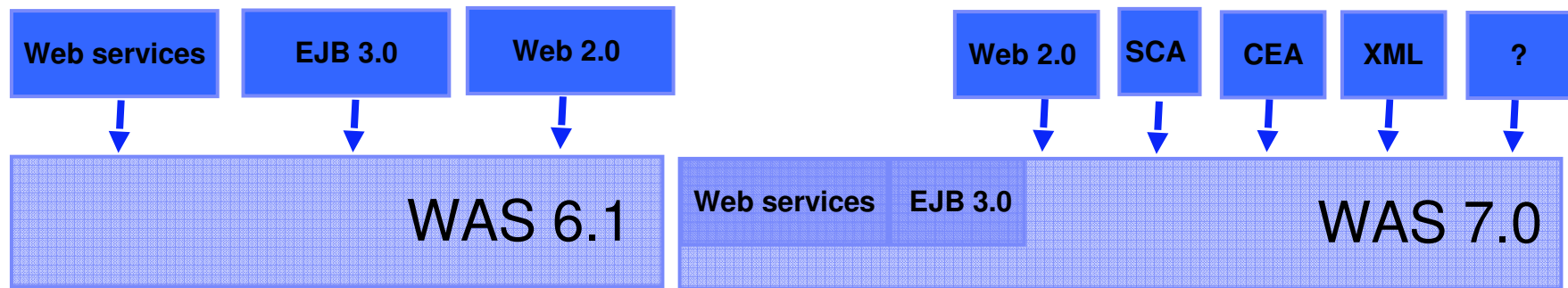
WebSphere Application Server Roadmap

WebSphere software

September 2008
WAS **V7!**

Q3 2011
WAS **V8!**

2011

2010

December 2004 **V6**

2009

July 2000 **V3.5**

2008

November 2002 **V5**

2007

2006

2005

2004

June 1998
WAS **V1**

Dec 1998 **V2**

2003

June 2006 **V6.1**

2002

2001

December 2003
V5.1

2000

November 2009
V1.1 WebSphere
CloudBurst /
WAS Hypervisor
Edition Launch

1999

August 2001 **V4**

1998

Sept 1999 **V3**

Evolution of WAS

Revolutionizing the way customers consume application server technology now and in the future

| Web services | EJB 3.0 | Web 2.0 | | | Web 2.0 | SCA | CEA | XML | ? |

WAS 6.1

Web services   EJB 3.0

WAS 7.0

1. Choose the application server technology you need.

2. Install additional functionality on core WAS Application Server

3. Build the Application Server you want without waiting for new releases.

*As new technology evolves, so does WebSphere –
Get the technology you need now without waiting for a new release!*
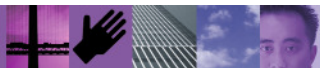
WebSphere Application Server V8.0 Beta Highlights

- **Broad programming model and standards support**
  - ▶ Enterprise JavaBeans 3.1, Java Persistence API (JPA) 2.0 , JavaServer Faces (JSF) 2.0, JavaServer Pages (JSP) 2.2, Servlet 3.0, Java EE Connector Architecture 1.6
  - ▶ Integrated SIP Servlet 1.1 support to speed development of converged communications applications

- **Fast, flexible and simplified application foundation**
  - ▶ Enhanced developer productivity during the edit-compile-debug cycle through directory-based drag and drop application install, uninstall and update
  - ▶ Faster time to value through a simplified product install, update and uninstall with integrated prerequisite and interdependency checking

- **Highly secure, scalable and manageable application foundation**
  - ▶ Simplified exchange of user identity and attributes in Web Services through Security Assertion Markup Language (SAML)
  - ▶ Web Services Security API (WSS API) and WS-Trust support in JAX-WS to enable customers building single sign on Web services-based applications
  - ▶ Improved governance through enhancements to the security auditing service

- **Integrated Tooling**
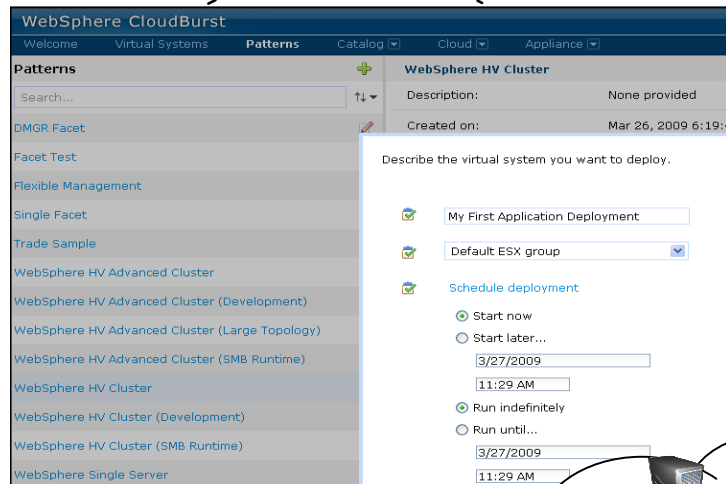 - ▶ Developer productivity is further enhanced using IBM® Rational® Application Developer
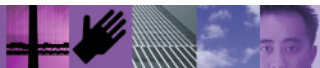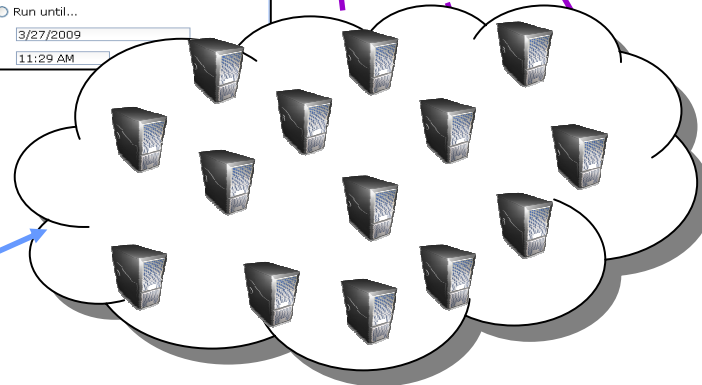
WebSphere CloudBurst
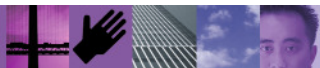
Two new WebSphere Cloud Products

1) WebSphere CloudBurst Appliance
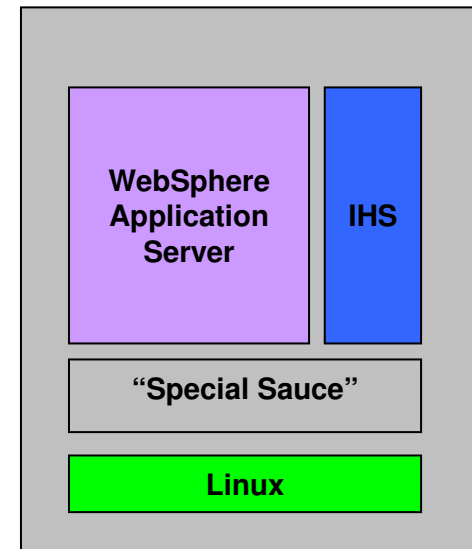### (hardware/firmware: manages/dispenses stored images)

2) WAS HyperVisor Edition
(Virtual Image-software)

2) CloudBurst dispenses WAS HV Servers

1) User requests WAS Environment to be dispensed

3) User can access WAS HyperVisor Servers (Virtual Image)

WebSphere Application Server

IHS

"Special Sauce"

Linux

The WebSphere CloudBurst appliance dispenses these virtual images into a private cloud
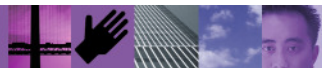
Working Together

At end of reservation,
remove virtual image(s)
from cloud

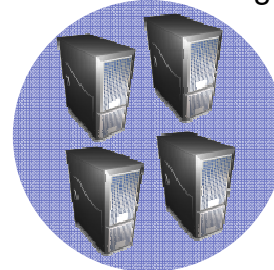Return capacity
to available pool

Out of the box:
- WAS 6.1 Hypervisor Edition
- WAS 7.0 Hypervisor Edition
- Management console
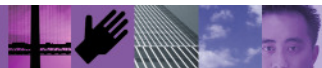- Pre-defined patterns

Run in cloud computing
environment

Custom:
- Customer-defined configurations

Dispense single virtual image
or customer environment

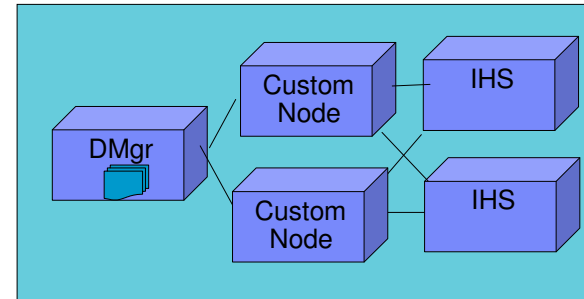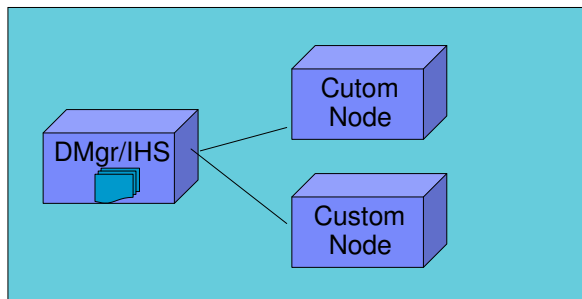* Will support other hypervisors in future releases
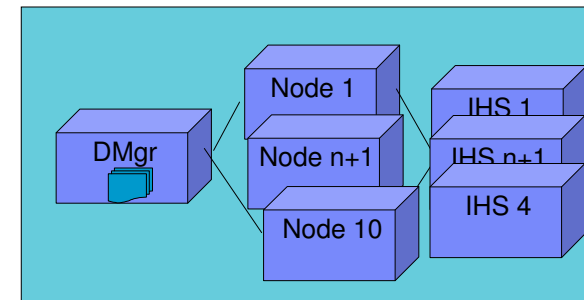
Preloaded Patterns
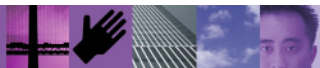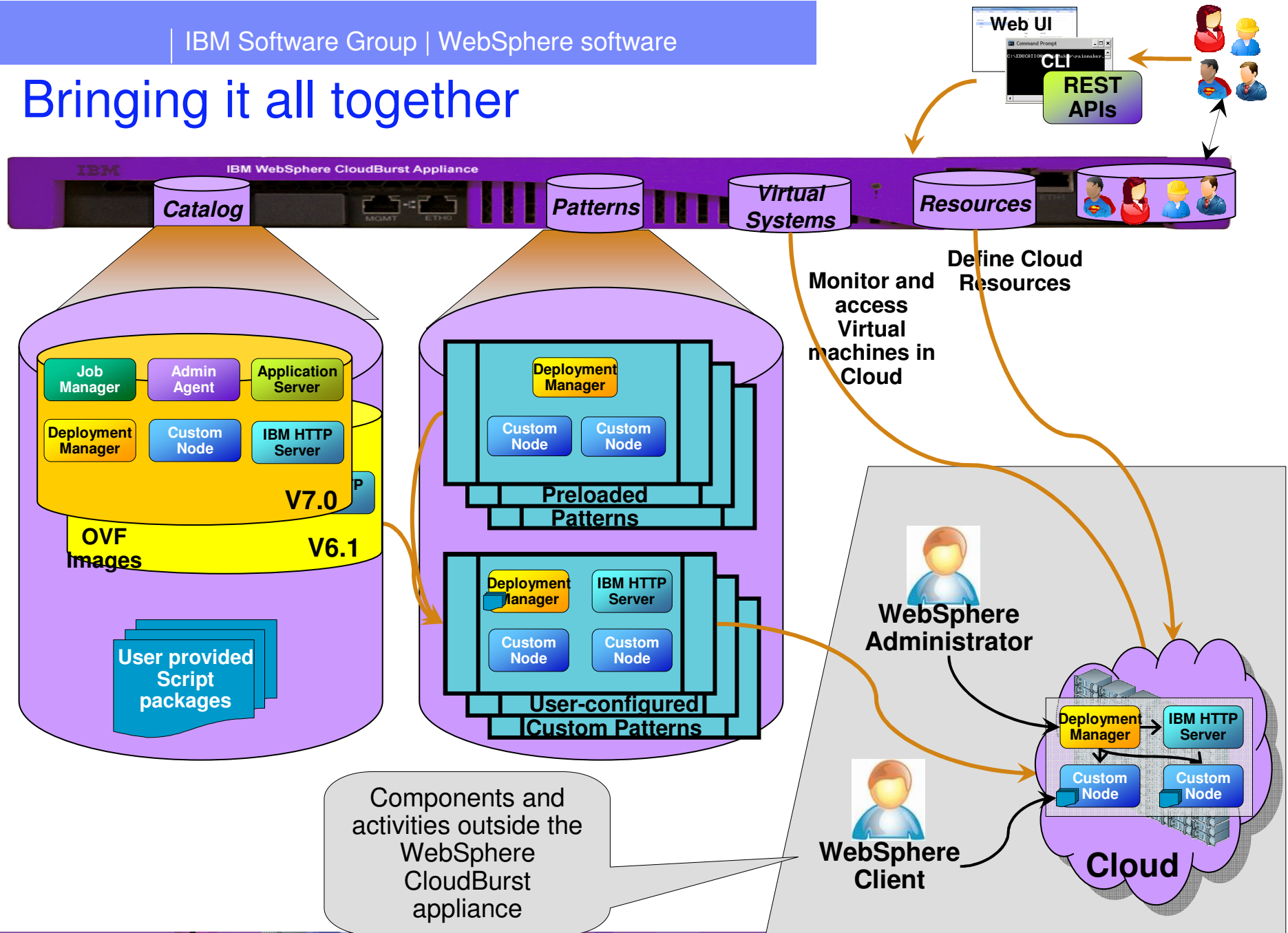
Single Server
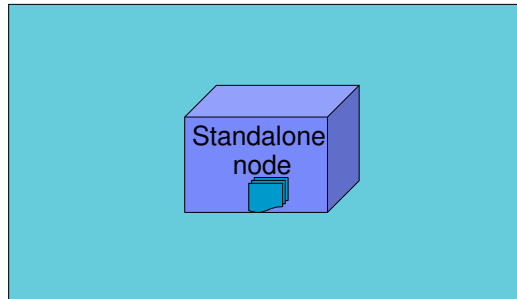
WebSphere cluster

WebSphere cluster (dev)

WebSphere cluster (large)

Advanced Options for Messaging, Session Persistence, and Global Security

Bringing it all together

Web UI

CLI

REST APIs

IBM WebSphere CloudBurst Appliance

Catalog

Patterns

Virtual Systems

Resources

Catalog

| Job Manager | Admin Agent | Application Server |
| Deployment Manager | Custom Node | IBM HTTP Server |

V7.0

OVF Images

V6.1

User provided Script packages

Patterns

Deployment Manager

| Custom Node | Custom Node |

Preloaded Patterns

| Deployment Manager | IBM HTTP Server |
| Custom Node | Custom Node |

User-configured Custom Patterns

Monitor and access Virtual machines in Cloud

Define Cloud Resources

WebSphere Administrator

WebSphere Client

Components and activities outside the WebSphere CloudBurst appliance

Cloud

| Deployment Manager | IBM HTTP Server |
| Custom Node | Custom Node |

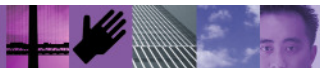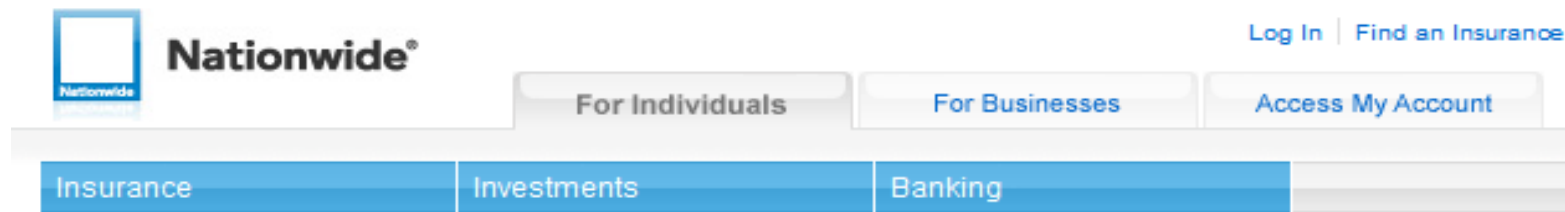# Insurance Company Improves fix management - Nationwide
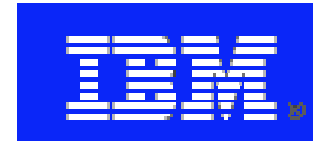
Nationwide®

Industry Pains

- Deployment of maintenance takes approx. 30 minutes

- Deployment of maintenance is a manual process, often executed in the middle of the night

Smarter Business Outcomes

- Deployment took 4 minutes!
- Deployment was automated
- Deployment was able to be scheduled, so no one had to wait up to kick off the process

Nationwide®

Log In | Find an Insurance

For Individuals   For Businesses   Access My Account

Insurance   Investments   Banking

# IBM Lab Increases Productivity and Agility

Industry Pains

- OS security compliance issues due to virtualization

- Low rates of hardware utilization

- Agile development requires high quality and broader testing

Smarter Business Outcomes

- No OS security compliance violations in 4 months

- Increased server utilization up to 90%

- Reduced standardized topology deployment from over 2 hours down to 18 minutes

- Leveraged existing hardware and software assets

Why Smart SOA Infrastructure?

"The ability to provide compliant patterns and images in our public lab while leveraging the speed and rapid deployment of virtualization is significant for our efforts to consolidate hardware, and reduce costs while at the same time providing onDemand access to development and test environments necessary for Agile development". **Frank Varone, Test and Quality Manager for WebSphere Application Server**
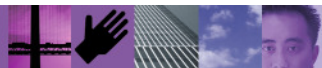
WebSphere CloudBurst Appliance Benefits

- **Consistency**
  - ▶ Your IT architect is a smart, likely well-paid person. It'd be great to be able to "bottle" his/her knowledge and share it throughout the organization. Now you can, w/ WebSphere CloudBurst Appliance's pattern facility
  - ▶ With new PowerVM support, this point is even stronger! Now, you can use the same patterns on X86 for dev/test as you use on PowerVM for production!

- **Cost**
  - ▶ Because of silos and isolation in organizations, there is difficulty in making use of idle compute capacity. By creating a managed shared resource pool, idle compute capacity is more readily available to a broader set of users. This increases utilization, which reduces costs.

- **Auditability**
  - ▶ When moving to a shared resource model, a question arises as to who pays for what. WebSphere CloudBurst Appliance can tell you who used what, and when, and you can use this information for chargeback purposes.

- **Speed / Lead time**
  - ▶ Instead of waiting days, weeks, or even months for a new environment to be made available for a new project runtime environment or a dev/test environment, you could have it in < 10 minutes w/ WebSphere CloudBurst
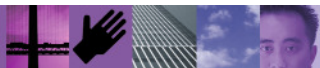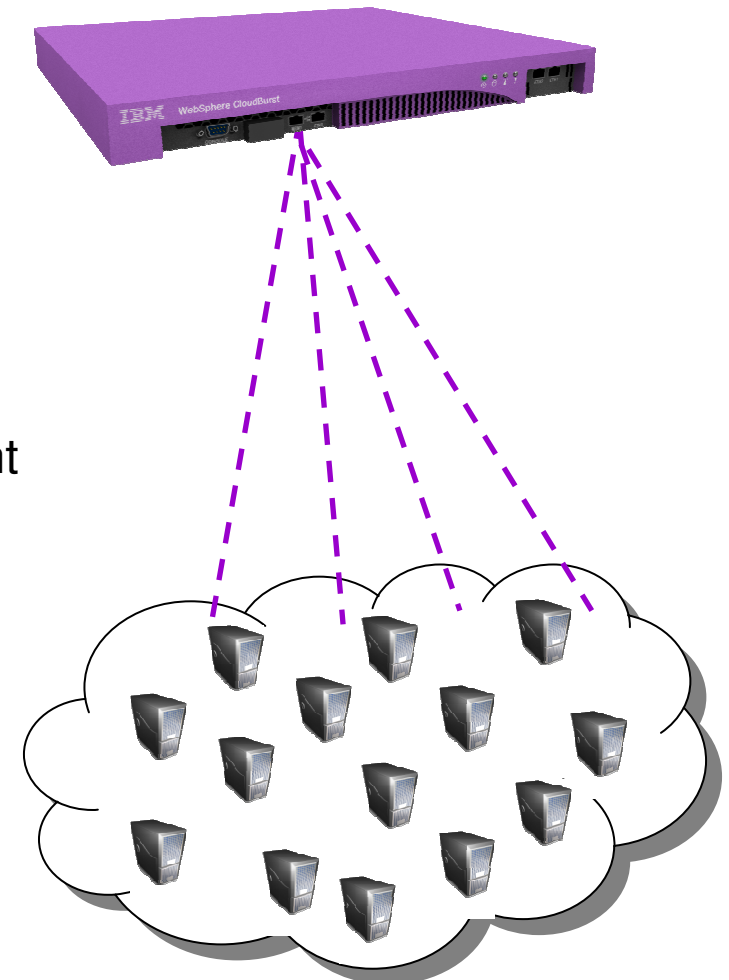
- **Skills**
  - ▶ WebSphere CloudBurst offers an incremental approach to learning WAS and building the skills to adopt it, as it handles the heavy lifting for you. As such, WebSphere CloudBurst is an enabler for folks who are still building their WebSphere Application Server skills
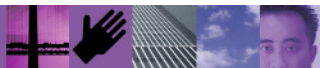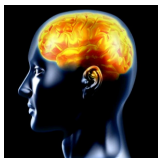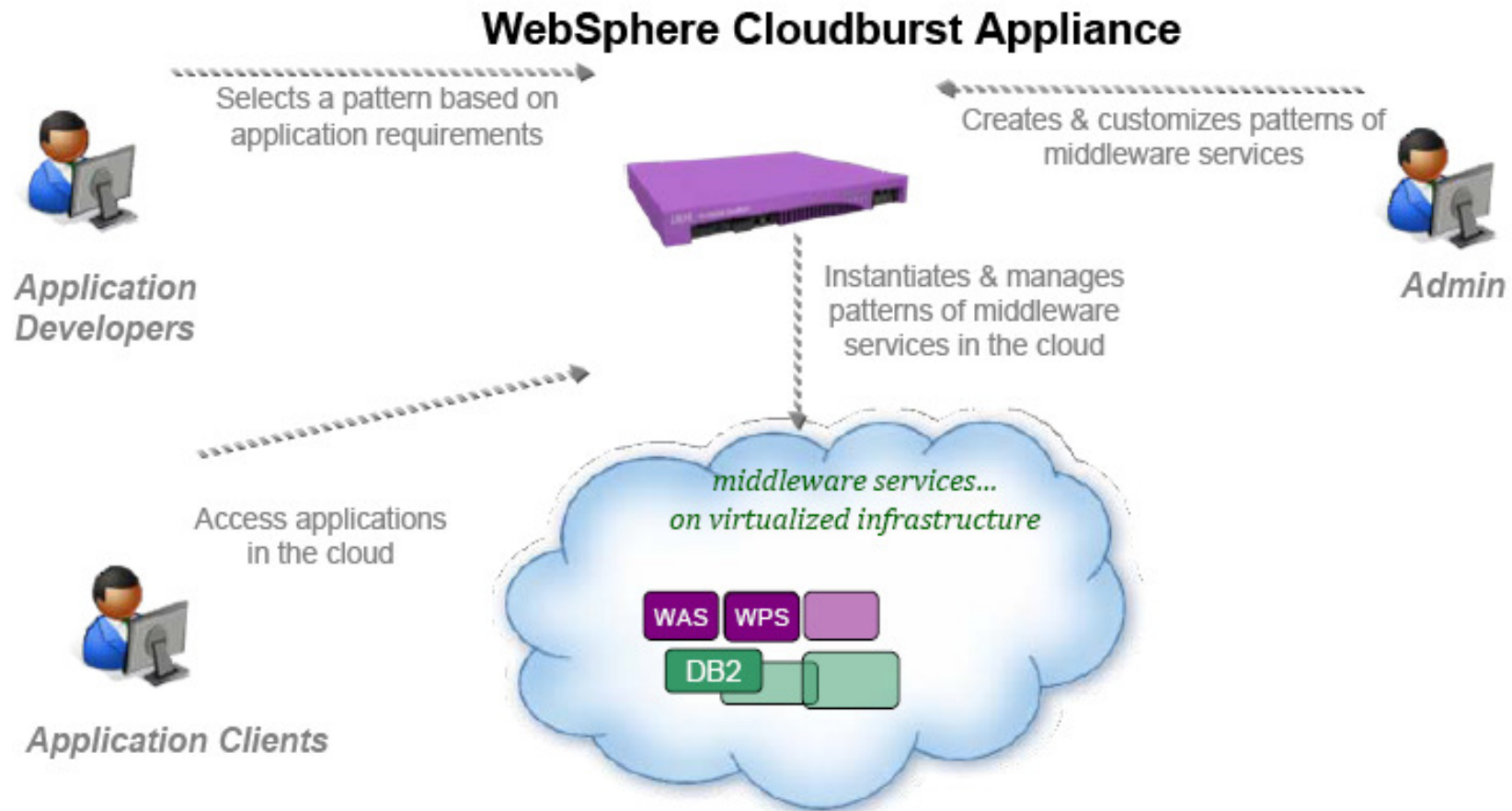
What's new in WebSphere CloudBurst Appliance V2.0?

▶ **Expanding platform support**
- System Z support (z/Linux on z/VM) – delivered in March 2010
- Support for Red Hat Enterprise Linux on X86 – **NEW!**

▶ **Expanding product support (beyond WebSphere Application Server and DB2)**
- Policy-based management support (Intelligent Management Pack) – **NEW!**
- WebSphere Process Server Virtual Image - **NEW!**

▶ **Mission-critical management**
- Elasticity of dispensed environments – **NEW!**

Deliver Greater Business Agility with Quicker Time-to-value, Improved Consumability & Lower Costs

WebSphere Cloudburst Appliance

Selects a pattern based on application requirements

Creates & customizes patterns of middleware services

Application Developers

Admin

Instantiates & manages patterns of middleware services in the cloud

Access applications in the cloud

Application Clients

middleware services... on virtualized infrastructure

WAS   WPS

DB2

Customers manage patterns of middleware services, and no longer need to deal with the details of middleware installation & configuration