The world is getting smarter – more instrumented, interconnected, intelligent.

Smart traffic systems
Intelligent oil field technologies
Smart food systems
Smart healthcare
Smart energy grids
Smart retail

Smart water mgmt
Smart supply chains
Smart countries
Smart weather
Smart regions
Smart cities

SOA was designed to enable these innovations
Adopting SOA is a Progressive Transformation of Applications, Processes and IT infrastructure

It is also a roadmap towards Cloud Computing.....

Start with disparate systems with complex integration

1. Pick an on-ramp project and start rationalizing

2. Build on the value of previous projects and reuse assets

3. Achieve a simplified SOA-enabled infrastructure

IT & Business Flexibility

Time

Start with disparate systems with complex integration
Cloud computing delivers IT and business benefits….beyond just agile applications based on SOA

**Virtualized**
- Higher utilization
- Economy of scale benefits
- Lower capital expense
- Lower operating expense

**Standardized**
- Easier access
- Flexible pricing
- Reuse and share
- Easier to integrate

**Automated**
- Faster cycle times
- Lower support costs
- Optimized utilization
- Improved compliance
- Optimized security
- End user experience

Doing more with less

Higher quality services

Breakthrough agility and reducing risk
Cloud Computing is the optimized infrastructure that makes SOA services even more efficient.

**Without cloud computing**

- Workload A
  - Software
  - Hardware
  - Storage
  - Networking

**With cloud computing**

- Workload A
  - Software
  - Hardware
  - Storage
  - Networking

- Workload B
  - Storage
  - Networking

- Workload C
  - Location independent
  - Rapid scalability
  - Self-service

- Virtualized resources
- Automated service management
- Standardized services

**Service management**
Roadmap towards Cloud Computing rely on good SOA practices to realize its full potential

- **Consolidate**
  - Reduce infrastructure complexity
  - Reduce staffing requirements
  - Manage fewer things better
  - Lower operational costs

- **Virtualize**
  - Remove physical resource boundaries
  - Increase hardware utilization
  - Reduce hardware costs
  - Simplify deployments

- **Standardize and automate**
  - Standardize services
  - Reduce deployment cycles
  - Enable scalability
  - Flexible delivery
SOA and Cloud Computing

*Cloud Services Delivery Framework is rapidly becoming available as the preferred way to host SOA based applications*

- SOA Processes
- SOA Services
- SOA Applications

### Cloud Applications
- Additional Partner Supplied Capabilities
- Business Process as a Service and Software as a Service
- Process Management
- Collaboration
- Analytics
- Shared Middleware
- Infrastructure
- Integrated Service Management
- Lifecycle and Business Support Services
There is a spectrum of deployment options for cloud computing....all of them supporting SOA

Private
IT capabilities are provided “as a service,” over an intranet, within the enterprise and behind the firewall

Hybrid
Internal and external service delivery methods are integrated

Public
IT activities / functions are provided “as a service,” over the Internet
Smart Business Development & Test on the IBM Cloud

IBM’s Public Cloud

- GA on May 25 in US
- Europe GA in 3Q

http://www.ibm.com/cloud

http://www.ibm.com/cloud/developer
IBM Smart Business Development and Test on the IBM Cloud provides you with an enterprise-class cloud environment for SOA applications Development, Testing and Production

Our solution provides the following:

- Choice of seven virtual server configurations
- Choice of pre-configured software images
  - Linux® operating systems; Red Hat and Novell SUSE
  - IBM Lotus®, WebSphere®, DB2® and Informix® stacks
  - IBM Rational® Application Lifecycle Management software
- Option to add persistent storage (charged for per gigabyte [GB] per month)
- Support options including a Web-based forum for users to submit requests

Payment options:

- Pay-as-you-go option (per virtual machine hour usage charge)
- Reserved capacity package options
  - Reserve a pool of resources in units of 64 base processors for 6 or 12 months
  - Monthly fee plus discounted usage rates
- Network bandwidth charged for per GB transmitted. IP addresses per hour.
Deploy a Service with a few mouse clicks

Your Development environment ready in a only minutes...

http://www.ibm.com/cloud/developer
### Development and Test on the IBM Cloud

#### Instances

<table>
<thead>
<tr>
<th>Name</th>
<th>IP Address</th>
<th>Host Name</th>
<th>Created on</th>
<th>Running</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>db2dima</td>
<td>129.33.194.45</td>
<td>vm035.developer.ihost.com</td>
<td>Oct 3, 2009</td>
<td>4 Days</td>
<td>Active</td>
</tr>
<tr>
<td>dima-rsa</td>
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<td>vm128.developer.ihost.com</td>
<td>Oct 3, 2009</td>
<td>4 Days</td>
<td>Active</td>
</tr>
</tbody>
</table>

**db2dima** [Change name] **Expires on 10/9/09 2 Days** [Extend]

[Add Instance] [View Asset Catalog]
# Packages for the IBM Cloud

## Option 1: Pay-as-you-go (VM/hour)

<table>
<thead>
<tr>
<th>VM Component</th>
<th>32-bit Configuration</th>
<th>64-bit Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bronze</td>
<td>Silver</td>
</tr>
<tr>
<td>Virtual CPU @ 1.25GHz</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Virtual Memory (GB)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Instance Storage (GB)</td>
<td>175</td>
<td>350</td>
</tr>
</tbody>
</table>

## Option 2: Reservation Bundles (OTC + Discounted VM/hour)

<table>
<thead>
<tr>
<th></th>
<th>6 month</th>
<th>12 month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small (64 CPUs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium (512 CPUs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large (1,920 CPUs)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Development and Test Software Image Catalog
All your SOA Middleware and Tools

Middleware Software

- DB2 Enterprise
- DB2 Express-C V9.7
- Informix Dynamic Server Developer Edition V11.5

WebSphere software

- WebSphere Application Server V7
- WebSphere sMash V1.1

Lotus software

- IBM Mashup Center v2.0
- Lotus Domino V8.5.1
Integration made easy with IBM Cast Iron…..SOA or not!

Complete Flexibility
- Cast Iron Cloud2™
- Physical Appliances
- Virtual Appliances

Total Connectivity
- TIP Exchange
- TIP Development Kit
- TIP Community

Complete Reusability
- For All Types of Projects
  - UI Mashups
  - Process Integration
  - Data Migration

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An ecosystem of IBM Business Partners support Smart SOA and the IBM Cloud
IT Infrastructure Health for SOA and Cloud

How to evaluate where you are?

Infrastructure Flexibility

Is your IT Infrastructure ready for SOA? How easily can I deploy Cloud Computing? Is my business able to take advantage of Cloud and SOA to the fullest extend?

Middleware

Do you have the right middleware technology to meet enterprise wide business requirements?

Service Management & Cloud

Is the strategy clear? Do you know where to start?
Common infrastructure symptoms

**Infrastructure Flexibility**
- Performance issues with demand peaks?
- Problems in tuning the system?
- Issues seem to pop up whenever changes are made to the systems?

**Middleware**
- Concerns about the scalability?
- Inconsistent communications plague the system?
- Asked to guarantee connectivity without knowing if that is possible?

**Service Management**
- System Performance is managed smoothly and efficiently?
- Changes are handled effectively and impacts to the system are known ahead of the change being deployed?
- Infrastructure is resilient and maintains high availability?
IBM Healthchecks for SOA & Cloud Strategy Workshops

- Applications and Services Healthcheck Workshop for SOA
- Application Development Services for Cloud Computing
- Infrastructure Healthcheck Workshop for SOA
- Cloud Strategy Workshop
Video Demo
IBM provides clear economic value and helps you work through the right mix of delivery models and choices (by workload) to reap the maximum benefit.

IBM supports industry standards, has over 8 million developers, and provides a platform for open innovation.

IBM provides Cloud solutions that are completely robust and secure, based on the demanding needs of today’s businesses: rapid provisioning, clear visibility of assets, robust data governance, and seamless mix of delivery models.

From sourcing to usage to maintenance, IBM Cloud solutions are designed to be simple, intuitive, and built based on how people actually work.

IBM has partners, delivery centers, and a world-wide network of partners in 174 countries. And we have the experience of running a globally integrated enterprise, so we understand what it takes to make a global company run.
Thank You

wfalk@us.ibm.com
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