Get Started on SOA

Why IBM for SOA

Why Should I Choose IBM for SOA?

IBM is the only vendor that provides comprehensive SOA support.

There are other vendors...

Service Oriented Finance CIO

IBM
We already saw that only IBM can get you started on all aspects of SOA.

Apart from the most comprehensive support for SOA Entry Points there are many other reasons why only IBM can live up to the promise of SOA. Lets understand those now..

**IBM SOA Support Leads the Competitors**

<table>
<thead>
<tr>
<th></th>
<th>IBM</th>
<th>Oracle Fusion</th>
<th>Microsoft</th>
<th>Tibco</th>
<th>BEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Re-Use Creation</td>
<td>Good</td>
<td>Poor</td>
<td>Fair</td>
<td>Poor</td>
<td>Fair</td>
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<tr>
<td>Process</td>
<td>Good</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
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<tr>
<td>Connectivity</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
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<tr>
<td>Information</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
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<tr>
<td>People</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
<td>Poor</td>
<td>Poor</td>
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<tr>
<td>SOA Governance</td>
<td>Good</td>
<td>Poor</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
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<tr>
<td>Manage Service Layer</td>
<td>Good</td>
<td></td>
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</tbody>
</table>
What Should You Expect from an SOA Vendor?

- Superior Foundation
- Commitment to SOA
- Productive Tools
- Helpful Services
- Best Practice Experience

WebSphere Provides a Superior SOA Foundation

- Open standards
- Best Performance
- High Availability
- Easier to Manage
- Fastest time to solution with advanced SOA tools
- Dynamic Provisioning to improve utilization
- No planned outage
- zSeries support
WebSphere is IBM’s SOA Platform – One Integrated Stack

WebSphere Application Server Family

Customer Needs

Capabilities

Built on a common codebase
Built on open source technology
The Open Standards Approach

- Open Development Integration Platform
  - Eclipse
  - IBM donated $40M of initial technology
- Open Application Integration
  - Web Services
  - IBM led or co-led the creation of SOAP, WSDL, UDDI, WS-Security, BPEL4WS...
- Open Application Server
  - J2EE and Apache
  - IBM contributed significant technology to J2EE and helped form the Apache Software Foundation
- Open Operating System
  - Choice Includes Linux
  - IBM is the #1 commercial supporter

WebSphere Network Deployment (ND) Delivers High Availability

- Built-in clustering capability eliminates single points of failure and also provides
  - Work Load Management – balance client requests across application servers
  - Failover – upon failure of server, automatically redirect requests to redundant server

- Enables isolation of application servers. Each application server
  - Loads from local file system
  - Runs its own services (JNDI, security)
  - Logs distributed transactions

- Built-in High Availability Manager reduces the amount of time it takes to recover
WASND Cluster Test: System Failure on Node 2

OracleAS 10g R3 Cluster – System Failure to Node 2

Default configuration
- Dynamic discovery cluster model
- Multicast (in-memory) replication (JGroups 2.2.8)
**OracleAS 10g R3 Cluster – Recovering from System Failure to Node 2**

- Default configuration
  - Dynamic discovery cluster model
  - Multicast (in-memory) replication (JGroups 2.2.8)

![Diagram](image)

**WebSphere Application Server – Extended Deployment XD**

- **Dynamic Provisioning**
  - Dynamic clusters enable pooled resources to be dynamically allocated to meet the defined goals
  - User-defined service policies specify operational goals and relative importance of applications

- **No Planned Outage**
  - Interruption-free rollout of application updates
    - Application Edition Management
    - Ability to roll back to a previous application version

- **Long Running Application Support on zOS**
  - "J2EE Batch" in XD takes advantage of zOS’s channel architecture
  - Feature is ideal for long running application that loop through millions of customer records
Oracle Portal Architecture Leads to Poor Performance

- Architecture requires each client request for a portlet to communicate via multiple network hops.
  - Communication is done using slow HTTP protocol; secure HTTPS makes communication even slower.

Source: http://download-west.oracle.com/docs/cd/B14099_19/portal.1014/b19305/img/cg_prtl_mtier_flow.gif
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IBM Development Tools Deliver Productivity Based on 30 Years of Best Practices

- IBM Software Development Platform
- Integrated Lifecycle Development
- Integrated Development Tools
- Unified Modeling Language (UML)
- Systematic Testing
- Team Processes
- Iterative Development
- Integrated Best Practices
- Architecture and Modeling Tools
- Individual Developer Tools

IBM Tools for SOA Development

Function delivered as perspectives in eclipse

Eclipse | Third Party | WebSphere Integration Developer | Rational Application Developer | WebSphere Developer for System z | Rational Software Modeler

JAV A | DEBUG | C / C++ | PHP | INTEGRATION | WEB | J2EE | TEST | PROFILING | COBOL | PL/1 | JCL | CICS | IMS | HOST | EXPLORER | CICS FLOW | MODELER | MODELLING

IBM RAD #1 in Evans IDE Study

16 Categories in the Study
- Compiler/Interpreter
- Debugger
- Editor
- Make/Build
- Documentation
- Application Modeling
- Web Design Tools
- Sample AppsProfiler
- Compiler Performance
- Performance of Resulting Application
- Ease of Use
- Ability to Integrate Third Party Tools
- Availability of Third Party Tools
- Quality of Tech Support Options
- Quality and Size of Developer Community

Source: Evans Data Corp IDE Study June 2006
Branham Group Development Tools Study

Get the job done faster with Rational Application Developer

<table>
<thead>
<tr>
<th>Application Scenario</th>
<th>IBM</th>
<th>Microsoft</th>
<th>Slower by</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Build a Simple Web Application</td>
<td>251</td>
<td>221</td>
<td></td>
</tr>
<tr>
<td>2. Build Web Service from Scratch</td>
<td>19</td>
<td>40</td>
<td>2.1X</td>
</tr>
<tr>
<td>3. Build Web Service from Existing Code</td>
<td>9</td>
<td>22</td>
<td>2.6X</td>
</tr>
<tr>
<td>4. Implement Distributed Transactions</td>
<td>27</td>
<td>41</td>
<td>1.5X</td>
</tr>
<tr>
<td>5. Build &amp; Deploy Human &amp; Automated flows</td>
<td>145</td>
<td>Unsupported</td>
<td></td>
</tr>
<tr>
<td>6. Build Portlet Function for a Portal</td>
<td>44</td>
<td>96</td>
<td>2.2X</td>
</tr>
<tr>
<td>7. Connect Portlet to Enterprise Systems</td>
<td>23</td>
<td>74</td>
<td>3.2X</td>
</tr>
<tr>
<td>8. Model Key Components of Application</td>
<td>2</td>
<td>5</td>
<td>2.4X</td>
</tr>
</tbody>
</table>

Note: All time is in minutes

To download study go to: http://www.branhamgroup.com/article.php?cat=reports&id=38

Source: Branham Group Inc.

DEMO: Let’s Compare Creating a Web Service

We need to create Branch Locator Web service.

Side by Side Comparison

**IB\M Rational Application Developer**
- Wizard generates all the code
- Handles simple & complex data types
- Provides built in testing

**Microsoft Visual Studio.NET 2005**
- select existing code
- Order Summary
Creating a Web Service - Microsoft

- Lack of wizard support in Visual Studio.NET for creating Web Services from existing artifacts
  - Must code manually

- Visual Studio.NET test harnesses limited to simple Web Services with Primitive Parameters
  - Build your own test client

Rational Application Developer 3 minutes
Visual Studio.NET 15 minutes

5 X Difference

Source: IBM CPO Research 03/06, RAD V6.0.1 vs. VS.NET 2005

AIG Systems Solutions Pvt. Ltd.

- Customer Background
  - Provides the global AIG Group with ongoing application development and management support

- Challenge
  - Increase the efficiency of application development
  - Ensure adherence to J2EE best practices
  - Contain development costs

- Solution
  - IBM Rational Application Developer for WebSphere Software platform

- Benefits
  - Increase in design staff productivity by 20%-25%
  - Ease of incorporating richer functionality into resulting code
What Should You Expect from an SOA Vendor

- Proven experience, and a deep understanding of business.
- Unmatched ability to deploy with over 3000 SOA projects worldwide
- IBM Business Consulting Services pioneered the Component Business Model (CBM), deconstructing the hundreds of processes and applications that define discrete business functions in virtually every major vertical industry and business segment.

Helpful Services

Best Practice Experience

IBM Services Offerings for SOA

- IBM Component Business Modeling Services (SM)
  - Gain significant new insights into the strategy, technology, operations and investment alignment of your organization.

- Business Enablement Services for Service-Oriented Architecture
  - Assessment, plan vision and transition plan

- Design and Implementation Services for Service-Oriented Architecture
  - Code development, support material and deployment

- IT Infrastructure Planning and Design for On Demand Business
  - Create vision and architecture blueprint

- Management Services for Service-Oriented Architecture
  - Ensures that the SOA initiative achieves optimal results

IBM has over 60,000 consultants with expertise in building flexible infrastructures using service oriented architecture and Web services. Click the Services tab on www.ibm.com/soa for a full list of SOA services offered by IBM.
What Should You Expect from an SOA Vendor

- Entry Point Designs for SOA based on hundreds of customer projects
- SOA Center of Competence
- SOA Readiness Assessment
- SOA Business Catalog
  - A single, comprehensive online directory of reusable SOA content
  - Over 3615 reusable assets
- SOA solutions for the following industries
  - Aerospace and defense
  - Automotive
  - Banking
  - Electronics
  - Government
  - Healthcare and life sciences
  - Insurance
  - Retail
  - Telecommunications

IBM is the leader in SOA
- IBM plays a leadership role in more than 50 standards bodies, including all key Web services standards
- IBM holds more than 300 SOA-related patents
- IBM has more than 1000 SOA clients globally
- IBM is the undisputed SOA market leader!

WebSphere has SOA breadth and depth
- Broad portfolio relied on by over 87,000 customers
- #1 across application integration middleware
- Extensive ecosystem – more than 4,000 partners and 3,150 active ISV solutions

IBM invests more in SOA
- IBM invests over US $1B per year in SOA and SOA-related technologies
- Over 6,700 IBM developers
- Over 10,750 IGS technical practitioners trained on WebSphere
Roadmap to Get You Started

Take the IBM SOA Self Assessment

Choose Products from Solution Consultant Express

Get Started with Entry Point Projects!

Contact IBM Sales or Business Partner

http://ibm.com/soa

DEMO: Solution Consultant Express (SCE)

- Prescriptively guide the user to the best fit of technology to problem
- Provides a systematic analysis of business and IT requirements
- Generates dynamic solution information customized to the user’s input
- Accelerates the solution proposal, design, and planning activity

Launch SCE

Interview

Architecture

Guidance
Thank You