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Java Application Platforms for Lightweight Workloads

Insight into Red Hat's Application Platform Strategy

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JBoss Product Line Director
Red Hat
September 2009
About Me

- JBoss Product Line Director
  - Manage the application server business
- Joined Red Hat in 2005
- Former Director of IT at UBS Investment Bank
  - Led one of the first mission critical Java EE deployments
- Former technology consultant with Arthur Andersen
- Born & raised in Chicago!

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  - @darcy_aaron
Today's Discussion Topics

- Brief overview of JBoss Enterprise Middleware
- Review recent application server market observations
- Describe Red Hat's application platform strategy
- Review JBoss solutions for Java applications
JBoss Enterprise Middleware
Portfolio Overview

JBoss Enterprise Portal Platform
Content Aggregation, Presentation and Personalization

JBoss Enterprise Application Platform
JBoss Enterprise SOA Platform
JBoss Enterprise BRMS

JBoss Enterprise Web Platform
JBoss Enterprise Data Services Platform

JBoss Enterprise Web Server
Service Integration/Orchestration, Business Process Automation, Rules Definition, and Event Management

Eclipse IDE
Integrated tooling (plugins)
Embedded runtime platform

Fully integrated dev environment

JBoss Operations Network

Data Integration, Data Service Federation, Data Abstraction and Management
Administration, Management, Monitoring
JBoss Enterprise Middleware Customers

Example Customers

Selected JBoss for superior flexibility, improved performance, benefits of open source, better support & lower TCO
JBoss Development Model

**Community**

- Focus “release early, release often”
- 50+ projects with different release schedules, dependencies, versions etc.
- 100,000+ registered developers
- Community support via forums, project developers, wiki, issue trackers, etc.

**Enterprise**

- Use case driven platforms that integrate multiple projects into a single distribution
- Focus on long-term stability, security, supportability, & sustainability
- Longer product support lifecycles that maintain application compatibility
- Up to 24x7 enterprise support for mission critical applications
JBoss Enterprise Middleware

What makes up a certified platform?

Each JBoss Enterprise Middleware platform goes through a 5 phase delivery methodology in its software development lifecycle:

1. jboss.org projects
2. Product requirements definition
3. Platform component engineering + integration
4. Platform testing certification + documentation
5. Platform release (general availability)

Deliver phase

Production Team

jboss.org engineers + community
Product management
JBoss productization engineers
JBoss QA documentation team, certified partners
JBoss release engineering
What Are They Saying?

Customers

- **Priceline.com (Ron Rose, CIO):** “Red Hat and JBoss have proven themselves to have enterprise-level tools that, when used well, help us attain what all companies want - great availability, great scale, and at a reduced cost when compared to proprietary solutions”

- **McKesson (Michael Simpson, CIO):** “McKesson chose to work with JBoss solutions because they were less expensive and still offered equal, if not better, solutions... as the company compared BEA to JBoss, it found that JBoss offered better support and better turn around time for defects”

- **Continental.com (Mike McDonald, Dir. of Technology):** “We’ve found a high-quality, easily scalable server that can match our business growth, as well as superior professional service from the expert developers behind the technology.”

Analysts

- **Gartner:** “Leader” in a Application Server & Integration Magic Quadrants

- **Forrester:** highest quality application server (2008 Global Forrester Research/BZ Media Application Platform Quality Online Survey)

- **Burton:** excellent platform for production environments large and small

- **BZ Research:** 32% application server marketshare, above IBM & BEA (Dec. 2008)
JBoss Enterprise Middleware
JBoss Application Platform Solutions

JBoss Enterprise Portal Platform
Content Aggregation, Presentation and Personalization

JBoss Enterprise Application Platform
JBoss Enterprise SOA Platform
JBoss Enterprise BRMS

JBoss Enterprise Web Platform
Application & Service Containers, Data Persistence, Messaging, & Transactions
Service Integration/Orchestration, Business Process Automation, Rules Definition, and Event Management

JBoss Enterprise Web Server
Data Integration, Data Service Federation, Data Abstraction and Management

JBoss Developer Studio
Eclipse IDE
Integrated tooling (plugins)
Embedded runtime platform
Fully integrated dev environment

JBoss Operations Network
Administration, Management, Monitoring
Market Observations

Our customers tell us that...

- Open source adoption is increasing & already part of many deployments
- Java EE is still too complex; other programming models gaining in popularity
- They need to build rich web 2.0 oriented applications easily
- Managing application infrastructure needs to be easier
- Three application workloads emerging:

  - **basic java web apps**
    - Simple, doesn't require enterprise services, Servlet container suffices
  - **Light & Rich Java Apps**
    - Require some enterprise features for scalability
  - **HIGHLY TRANSACTIONAL JAVA APPLICATIONS**
    - “Heavier”, require most Java EE features (and sometimes more), enterprise scale
Evolution of Enterprise Java

Numerous choices, depending on application requirements
Java Application Platform Strategy

JBoss Open Choice

• Maintain the ability to support any popular programming model
  • Java EE, POJOs, OSGi, Spring, Ruby, etc.

• Provide simple, flexible & standard platforms for common workloads
  • From light to heavy & everything in between

• Deliver a core set of enterprise services for manageability
  • Stable & consistent operational footprint, no matter the programming style

• Balance developer preference with operational stability
  • Future proof impact of new development choices
  • Single operations tools across all solutions

Choice without compromise.
JBoss Open Choice Architecture

Flexibility for today and for the future

- Next generation app server architecture
- Extreme configurability
- Minimalistic microcontainer separates cores services for modularity
- Microcontainer supports many component models
  - POJO, JMX, OSGi, etc.
- Common management infrastructure
- Single binary supports many popular deployment styles

APIs / Programmings Models
(POJOs, WS, REST, Java EE, Spring, Groovy, jRuby, etc.)

Core Enterprise Services

Transactions
Messaging
Caching
Remoting
Web Services
Clustering
Security
Persistence

JBoss Microcontainer
(Dependencies, Lifecycle, Management, Class-loading)

Java Virtual Machine

Deployment
(Data Center / Cloud / Device / PoS / Embed / etc.)
Solutions For Java Applications
Flexible solutions for common Java workloads

- Flexible, standards-based solutions targeted for specific Java workloads
- Support for popular open source frameworks, standalone or included with Platforms
  - JBoss Hibernate & Seam
  - JBoss Web Framework Kit (Google Web Toolkit, RichFaces, Spring, Struts, etc.)
- Single management tools across all types of Java applications

Note: Release dates subject to change
Example Workloads
Flexible solutions for common Java workloads

Simple Java Web Apps.

- JBoss Enterprise Web Server
  Apache Web Server (httpd) & Apache Tomcat

Light & Rich Java Web Applications

- JBoss Enterprise Web Platform
  JBoss AS (Web Profile), Clustering, Cache, REST, Basic Web Services, Hibernate, Seam, & JBoss Web Framework Kit

Java EE & Transactional Applications

- JBoss Enterprise Application Platform
  JBoss AS (Full Java EE), Clustering, Cache, Transactions, Messaging, REST, Full Web Services stack, Hibernate, Seam, & JBoss Web Framework Kit

Potential Examples

- Corporate websites & customer portals
- Live HD video streaming, inventory look-ups, online testing
- Travel bookings & reservation confirmations, online banking, ecommerc sites

- Virgin America
- priceline.com
- Continental Airlines
- AVIS Europe
# JBoss Application Platforms

## Feature Comparison

<table>
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<th>JBoss Enterprise Web Server</th>
<th>JBoss Enterprise Web Platform</th>
<th>JBoss Enterprise Application Platform</th>
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<tr>
<td><strong>Target Workload</strong></td>
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<tr>
<td>Web Server</td>
<td>Apache Web Server</td>
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<td></td>
<td>(with httpd connectors)</td>
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<td><strong>Load Balancing</strong></td>
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<td>(mod_connectors)</td>
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<td>Servlet Container</td>
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<td></td>
<td>Java EE</td>
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<td></td>
<td>JBoss Microcontainer</td>
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<tr>
<td></td>
<td>Architecture</td>
<td>-</td>
<td>Full Java EE</td>
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<tr>
<td></td>
<td>Clustering, Caching, Failover</td>
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<td>Yes</td>
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<td></td>
<td>REST</td>
<td>-</td>
<td>Yes</td>
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<td></td>
<td>Basic Web Services (JAX-WS)</td>
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<td>Comprehensive Web Services</td>
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<td></td>
<td>(WS-*)</td>
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<td>Yes</td>
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<td>Messaging</td>
<td>-</td>
<td>Yes</td>
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<td></td>
<td>Transactions Rollback/Recovery</td>
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<td>Yes</td>
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<tr>
<td><strong>Frameworks</strong></td>
<td>Hibernate</td>
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<td>Seam</td>
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<td>JBoss Web Framework Kit</td>
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<td><strong>Tooling</strong></td>
<td>JBoss Developer Studio</td>
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JBoss Application Platform Benefits

- Reduce complexity thru flexible solutions with everything you need
- Targeted platforms for specific workloads; only use features you require
- Make standards work for you & avoid lock-in through open source
- Enterprise management for every application, across the entire lifecycle
Learn From Our Customers

JBoss World Sessions To Consider

- **CME Group: From WebLogic to JBoss Enterprise Application Platform & Tomcat**
  - Thursday @ 10:50a  (Track: What's New / Path: Strategize)

- **Covad Communications: Carved Out Costs by Migrating SOA to JBoss Enterprise Middleware**
  - Thursday @ 2:40p  (Track: Carving out Costs / Path: Integrate & SOA)

- **Travelers Insurance: Building and Maintaining a Large Shared JBoss Infrastructure**
  - Thursday @ 3:50p  (Track: Decoding the code / Path: Operate & Manage)

- **NAVTEQ: Using JBoss Enterprise Middleware in NAVTEQ**
  - Friday @ 11:00a  (Track: What's New / Path: Strategize)

- And more: DST Health Solutions, ETS, Fed Ex, Nokia Seimens, Red Hat IT
JBoss Solution Overviews

JBoss World Sessions To Consider

- **JBoss Enterprise Portal Platform Customer Case Studies**
  - Wednesday @ 10:50a  (Track: Open Source for IT Leaders / Path: Strategize)

- **Enterprise Java Redefined: An Overview of JBoss Enterprise Application Platform 5.0**
  - Thursday @ 8:30a  (Track: Open Source for IT Leaders / Path: Strategize)

- **How to Effectively Manage Java Applications** (JBoss ON)
  - Thursday @ 9:40a  (Track: Decoding the code / Path: Operate & Manage)

- **Competitive Advantage with Open Source Business Process Automation** (SOA Platform, BRMS)
  - Thursday @ 10:50a  (Track: Open Source for IT Leaders / Path: Integrate & SOA)

- **Next Generation Open Source SOA** (ESB / SOA Platform)
  - Thursday @ 3:50p  (Track: What's New / Path: Integrate & SOA)
QUESTIONS?

TELL US WHAT YOU THINK:
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