JBOSS Application Platform 5
Webinar Series

Session #1
One Size No Longer Fits All:
An Overview and Road Map of JBoss Solutions for Java Applications

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#1 - One Size No Longer Fits All: An Overview and Road Map of JBoss Solutions for Java Applications
This session

#2 - Performance Tuning Tips & Tricks for JBoss Applications
Date: Wednesday, February 10, 2010

#3 - JBoss Productivity Frameworks: Using Seam, Hibernate and Rich Application Frameworks to Speed Up Your Development Time
Date: Wednesday, March 3, 2010

#4 - Using REST & Web Services In JBoss Application Platforms
Date: Wednesday, March 24, 2010

#5 - Safe & Secure: An Overview of Security Features in JBoss Application Platforms
Date: April 14, 2010

#6 - Configuration Made Easy: The New and Improved JBoss Admin Console
Date: Wednesday, May 5, 2010
Today's Objectives

- An overview of the JBoss Enterprise Middleware portfolio
- JBoss Application Platform Portfolio Overview & Roadmap
  - JBoss Enterprise Application Platform (EAP)
  - JBoss Enterprise Web Platform (EWP)
  - JBoss Enterprise Web Server (EWS)
  - JBoss Web Framework Kit (WFK)
- Q & A
JBoss Enterprise Middleware
Comprehensive Middleware Portfolio

JBoss Enterprise Portal Platform
Content Aggregation, Presentation and Personalization

JBoss Enterprise Application Platform
JBoss Enterprise SOA Platform
JBoss Enterprise Data Services Platform

JBoss Enterprise Web Platform
JBoss Enterprise BRMS

JBoss Enterprise Web Server
Application & Service Containers, Data Persistence, Messaging, & Transactions

Service Integration/Orchestration, Business Process Automation, Rules Definition, and Event Management

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
JBoss Enterprise Middleware
Comprehensive Middleware Portfolio

JBoss Enterprise Portal Platform
Content Aggregation, Presentation and Personalization

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JBoss Enterprise Web Platform
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JBoss Operations Network
Administration, Management, Monitoring
Extensive JBoss partner ecosystem that certifies, services and supports JBoss Enterprise Middleware solutions.
Selected JBoss for superior flexibility, improved performance, benefits of open source, better support & lower TCO
Focus “release early, release often”

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

- 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:
Enterprise Java – Changing Landscape

Enterprise Java Yesterday

Java EE

Enterprise Java Today & Tomorrow

Java EE
Spring
Seam
Groovy
Other Languages
POJO
OSGi
Ruby
Tomcat
Google
Java Virtual Machine

Other Frameworks
JMX
SCA
Tangentially
Java EE 6

Final Ballot for JSR-316, December 2009

12 Yes
1 No (Apache – License Issues)
2 Abstain (SAP, Intel – technicalities)
1 No Vote – Spring Source – No Comment

Red Hat commitment

CDI, Bean Validation – Spec. Lead
JAX-RS, JSF 2.0, EJB 3.1, Servlet 3.0, JPA 2.0, etc.
JBoss AS 6 M1
  CDI / Weld
  JSF 2.0
  Bean Validation
JBoss AS 6 M2
  Servlet 3.0
  EJB 3.1
  JAX-RS 1.1
Tangentially
What's new in Java EE 6?

Java EE Web Profile
- Subset of the EE platform for Web Applications
- More than JSP / Servlet (Tomcat)
- Strong support – JBoss, Glassfish, Resin
- Extensibility – with other frameworks
- Pruning – Entity Beans, JAX-RPC, JAXR

Major Updates
- EJB 1.1 / EJB Lite
- Servlet 3.0
- JSF 2.0
- JPA 2.0

New APIs
- CDI 1.0
- Bean Validation 1.0
- JAX-RS 1.1
Enterprise Java – Changing Landscape

Three Workloads Emerging

Basic Java Web Apps
- Simple
- No Enterprise Services
- Not enough
  Tomcat, Jetty, Resin

Rich Java Apps
- Simpler APIs
- Enterprise Scale

Enterprise Transactional Java Apps
- High level transactions
- Enterprise Scale Requirements
- Too Much
  Java EE : Weblogic
  JBoss, Websphere
 JBoss Application Platforms
A Quick Recap

JBoss Developer Studio

Web Framework Kit 1.0

JBoss Enterprise Web Server 1.0

JBoss Enterprise Web Platform 5.0

JBoss Enterprise Application Platform 5.0

Web Connectors

Native

Java SE 6: Sun, IBM, Azul, OpenJDK

Red Hat Enterprise Linux 4, 5, Solaris 9, 10, Windows 2003, 2008
### JBoss EWS, EWP and EAP Comparison

<table>
<thead>
<tr>
<th><strong>Capabilities</strong></th>
<th>JBoss EWS</th>
<th>JBoss EWP</th>
<th>JBoss EAP</th>
<th><strong>Java EE 6 Web Profile</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduler</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
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<tr>
<td>Session Replication</td>
<td>✗</td>
<td>✓</td>
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<tr>
<td>Admin Console</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Caching / Pooling</td>
<td>✗</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Multi-platform Support</td>
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<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>OS Native Extensions</td>
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<td>✓</td>
<td>✓</td>
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</table>

<table>
<thead>
<tr>
<th><strong>APIs / Standards</strong></th>
<th>JBoss EWS</th>
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<th><strong>Java EE 6 Web Profile</strong></th>
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</thead>
<tbody>
<tr>
<td>Messaging (JMS)</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
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<tr>
<td>Transactions (JTS / WS-TX)</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
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<tr>
<td>CORBA</td>
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<td>Connectors</td>
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<td>Transactions (JTA)</td>
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<tr>
<td>Web Services (JAX-WS/RS)</td>
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<td>Seam Framework</td>
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<td>EJB 3.0</td>
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<tr>
<td>Persistence (JPA)</td>
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<td>✓</td>
<td>✓</td>
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</tr>
<tr>
<td>Servlet / JSP</td>
<td>✓</td>
<td>✓</td>
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</tbody>
</table>
Which should I use EWS, EWP, EAP?

**JBoss EWS**

**JBoss EWS 1.0 Includes**

- **Tomcat** 5.5.23 and 6.0.18
- Tomcat Native 1.1.16
- **mod_jk** 1.2.27
- **Apache HTTP Server** 2.2.10

Certified on **RHEL**, Solaris and Windows
Certified on popular JDKs (Tomcat only)

**Use When**

- Require vanilla Apache
- Familiar with Tomcat operational footprint
- Only require Servlet / JSP
- Don't need robust HA / Session Replication
- Require timely patches, security errata
- Need Management & Monitoring (via **JBoss ON**)

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Which should I use EWS, EWP, EAP?

**JBoss EWP**

**JBoss EWP 5.0 Includes**

- **JBossWeb** – Efficient and scalable Web Container
  - Based on **JBoss AS 5.1**
- **Hibernate** – defacto standard Java ORM
- **Seam**
- Load-balancing, session replication, failover
- Certified on RHEL, Solaris and Windows
- Certified on popular JDKs
- Certified against popular databases

**Use When**

- Familiar with JBoss operational footprint
- Need Management & Monitoring (via **JBoss ON**)
- No requirement for:
  - Asynchronous Messaging
  - Java Transaction Service / XTS
  - Connectors
  - CORBA
Which should I use EWS, EWP, EAP?

**JBoss EAP**

**JBoss EAP 5.0 Includes**

Everything included in JBoss EWP
Also Messaging, CORBA, JCA, JTS Support

**Use When**

Familiar with JBoss operational footprint
Need Management & Monitoring (via JBoss ON)
Application does (or will) use full Java EE 5
When should I use EWS, EWP, EAP?

- JBoss EWS (Tomcat)
- JBoss EWP
- JBoss EAP
JBoss Web Connectors
HTTP Request Load Balancing

- Microsoft IIS
- Apache HTTPD
- Sun Web Server
  - mod_cluster
  - mod_jk
  - isap_connector
  - nsapi_connector
  - JBoss EAP
  - JBoss EWP
  - Tomcat (JBoss EWS)
Web Connectors
Intelligent HTTP Load Balancing with mod_cluster
JBoss Native Components
OS Integration

Web Connectors
- mod_cluster
- mod_jk
  - isap_connector
  - nsapi_connector

JBoss EAP
- JBoss EWP
- Tomcat (JBoss EWS)

JBoss Native Components
- jbosssvc
  - wrapper
- openssl
  - apr / apr-util

Red Hat Enterprise Linux 4, 5
Solaris 9, 10, Windows 2003, 2008
“Andiamo” Initiative

Address Ease of Use across all JBoss Platforms for:

Developers

- Startup-time, restart-time, deploy-time,
- Embeddable, unit-testing, Debugging and Diagnostics
- Choice and support for Tools / Frameworks / Languages

Production

- Price / Performance, Scalability, “Tunability”
- L10n, i18n
- Manageability
- Diagnostics, Monitoring
- Common logging, pooling, configuration
- Consistent HA / CA architecture
- Scriptability (CLI and Management API)
“Andiamo” Initiative Progress

Developers

JBossTools, JBDS
Startup-time reduction in AS 6.0 M1
EmbeddedAS Prototype in AS 6.0 M1
Arquillian, ShrinkWrap
Support for scripting languages like Ruby - TorqueBox

Production

Clustering made easy – Cirras
Management – RHQ, JOPR
Performance enhancements in EAP 5.0, 5.1, HornetQ 2.0
Involvement in SPECjEnterprise2010
Application Platforms Roadmap

EAP 5.0
20% > Throughput
Microcontainer 2.0
Java EE 5
Embedded Console
JBoss Native
RESTEasy 1.1
Hibernate Search
Security

EWP 5.0
Web Connectors
HornetQ TP
WS-CXF TP

EAP Springtime
Performance
HornetMQ
JBoss WS-CXF
EAL 4+

EAP Lancer
20% > Throughput
Java EE 6
Task Based UI
New Domain Model
Management CLI / API
Embedded Mode
JBoss EWP / EAP Roadmap

EAP / EWP 5.1 (Springtime / Snowbank)

Target – Q3 CY2010*

More Performance Enhancements
Embedded Console Enhancements
Target for Common Criteria Certification, EAL-4
HornetQ 2.x Fully Supported
JBoss WS-CXF Fully Supported

* Currently still in planning – dates and features can and will change
JBoss EWP / EAP Roadmap

EAP / EWP 6.0 (Lancer / Eagle)
Target Q1 CY2011*
Performance, performance
Full task-based Console, domain-management
Management API and CLI
EmbeddableAS for easier testing
i18n, L10n Progress
Java EE 6.0 (including Web Profile)

* Currently still in planning – dates and features can and will change
On the Horizon
Things we're thinking about

Beyond the traditional Application Server
Data Grids – scaling the Data Tier
Multilingual Virtual Machine

“Cloud” Support

- Better support for virtualized environments
- Lower resource utilization
- Larger domains, possibly multi-tenant
- “Spillover” to public clouds like AWS
- More dynamic provisioning / deployment
- Soft / Virtual Appliances
Additional Resources
Learn more, listen to customers, evaluate solutions

Who else is using JBoss Enterprise Middleware?
http://www.jboss.com/customers/

More information on JBoss Application Platforms
- Product Information: http://www.jboss.com/products/javaapps/

Try JBoss Enterprise Middleware
http://www.jboss.com/downloads/

JBoss Application Platform Webinar Series
- Next Session:
  - #2 - Performance Tuning Tips & Tricks for JBoss Applications
  - Date: Wednesday, February 10, 2010
The Red Hat Summit and JBoss World are the premier open source events that bring together engineers, business decision makers, developers and community enthusiasts to learn about the latest in open source cloud, virtualization, platform, middleware, and management technologies.

Attendees will learn about open source advancements through: technical and business seminars, hands-on labs and demos, customer case studies, networking opportunities, partner displays, visionary keynotes, and direct collaboration with Red Hat engineers.

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