LEARN. NETWORK. EXPERIENCE OPEN SOURCE.
Agenda

- Integration Products Introduction
- Recent History
- Trends and Directions
- Announcement: v5.3
- Looking Ahead
- Session References
- Q/A
JBoss SOA/Integration Products
Is Integration important?

Through 2016, companies will continue to spend more of their IT budget on application integration than on building new applications. -- Gartner 2012
Red Hat Integration Technology Strategy

- Deliver enterprise-class SOA/Integration middleware to enable the Intelligent, Integrated Enterprise
- Work with the open source community and customers to create technologies that:
  - offer significant value-adds to business and IT
  - build upon strong core services and extend with ESB and advanced data, process, messaging, event processing and decision services
- Provide a highly flexible platform portfolio from the highest quality and most innovative components
Comprehensive Middleware Portfolio

Core Principles: Enterprise Class – Open Choice – Value

- Cloud & On-premises
- Rock-solid reliability, performance & long-term stability
- Exceptional support
Comprehensive Middleware Portfolio

Core Principles:  **Enterprise Class**  –  **Open Choice**  –  **Value**

- Cloud & On-premises
- Rock-solid reliability, performance & long-term stability
- Exceptional support
JBoss Enterprise SOA Platform 5

A flexible, standards-based platform to integrate applications, SOA services, business events and automate business processes.

- Open Choice Integration
  - Application/EAI
  - Service-oriented
  - Event-driven
  - Messaging
- Workflow
- Service Orchestration
- Intelligent routing
- Registry
- Rock solid enterprise-grade
Turns the data you have into the information you need

Augments and extends SOA Platform to address data access, integration and abstraction.

• Master Data Services
• Data Governance, Compliance
• Reporting/Analytics enablement

Real-time read/write access to heterogeneous data stores

Speeds application development by simplifying access to distributed data

Centralized access control, auditing
JBOSS ENTERPRISE BRMS


Features

- Highly flexible and customizable
- Tools for business users and developers
- Open, standards-based

Benefits

- Empowers the business to manage critical business logic
- Enables business agility

JBoss Enterprise BRMS 5

Development Tools

- Business Rules: Declarative, Inference Rule Execution
- Business Process: BPMN 2.0 Modeling, Automation
- Authoring And Governance: Guided Authoring, Validation, Testing, Packaging, Provisioning

Repository

- JCR 2, Version Control

CEP

- Temporal Reasoning, Slicing Window

Container

- Stand Alone JVM, Web Container, Full EE Container, SOA Runtime

Management Tools
Recent History – last 12 months

v5.2 – Oct/Nov 2011

Over 25 community releases

Training classes
  • ESB, BRMS

Intelligent, Integrated Enterprise direction

Work leading up to v5.3

Collaboration with SAP

JBoss ESB Beginners Guide:

Image source:
Trends and Directions
Changes underway

Cloud

Interconnected-ness  Information Management
Changes underway

Cloud

IaaS, SaaS, PaaS, iPaaS, as-a-service; public, private hybrid;
Elasticity; security; location-independence; on-demand; self-service;
Open APIs; flexibility; multi-tennancy;
Shifts in responsibility and influence; new cost models;

Cloud drives/needs:
• Service Orientation
• Open APIs, REST
• Varied deployment environments
• Lightweight, scalable
Changes underway

Beyond integrated applications, internet-of-things (sensors, devices, kiosks, embedded systems, ...). Things expect to be connected. Service interfaces, public APIs; Generating and exposing information; Everything a producer and consumer of information.

Mobile; Social, internet-of-people.

Interconnected-ness drives/needs:
• Open/Public APIs, REST
• Varied interfaces for different participants
• Systems must handle many/varied data and events
Changes underway

Big Data, NoSQL, NewSQL, DataGrids;
Real-time decisions; analytics; Hadoop; MapReduce, Data Marts;
Increasing data volumes; structured/unstructured; storage; logs, click-traffic, location data, status data;
Cloud-based and Interconnected systems producing and consuming more and varied information.

Information Management drives/needs:
• Polyglot data management and integration
• Hybrid storage models
• Analytics
• Real-time information processing
Integration Needs

- Service Orientation
- Open/Public APIs, REST
- Variety of deployment environments
  - Lightweight, scalable
- Varied interfaces for different participants
- Systems must handle many/varied data and events
- Polyglot data management and integration
- Hybrid storage models
- Analytics, Real-time information processing
Announcement: v5.3

SOA Platform, BRMS Platform, EDS Platform
JBoss SOA-EDSP-BRMS 5.3 Announcement Summary

- Intelligent, Integrated Enterprise
  - Winning business execution
- JBoss Enterprise SOA Platform 5.3 - July
  - Bridge to Camel – integration development productivity
- JBoss Enterprise Data Services Platform 5.3 - July
  - Apache Hive tech preview - big data integration
- JBoss Enterprise BRMS 5.3 with jBPM v5 - June
  - Unified process, rules, event processing
Introducing JBoss Enterprise BRMS 5.3


Features

- Highly flexible and customizable
- Tools for business users and developers
- Open, standards-based

Benefits

- Empowers the business to manage critical business logic
- Enables business agility
Choice of Tools

Business User Friendly – Web Based

Developer Friendly – IDE Based

Decision table

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<tr>
<th>Description</th>
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Rule Four
- FirstAgenda
- Rule Two
- Rule One
- SecondAgenda
- Rule Three
New! Business Process Runtime
JBoss Enterprise SOA Platform 5.3

- Open Choice Integration
  - Application/EAI
  - Service-oriented
  - Event-driven
  - Messaging
- Workflow
- Service Orchestration
- Intelligent routing
- Registry
- Rock solid enterprise-grade

New in version 5.3:
- Apache Camel Gateway
- HornetQ JMS messaging certification
- Additional BRMS integration (BPMN2-based orchestration)
- ESB monitoring enhancements
- JBoss Developer Studio v5.0
- Component updates
Overview of Key Changes

Camel Gateway

- What is Camel? – Enterprise Integration Patterns (EIP) framework.
  - Lightweight, developer friendly, vibrant community
- Gateway based on Camel Core.
- Camel has large and growing set of components (analogous to adapters)
- With SOA 5.3 Camel extends the reach of the ESB in SOA Platform.
Overview of Key Changes

ESB Monitoring Enhancements

• **Service Interceptors**
  - Hook into BAM or event processing. Invoked at: Service Instantiation, Start, End, Failure
  - Provide information about message content and service config.

• **RecordRoute**
  - Track history of message through a set of services
  - Configurable on a Service-basis or Message-basis

• **Dynamic Service Listener thread config**
  - Enables customized throttling at the service level
Overview of Key Changes

JBPM 5 integration with ESB

- JBPM 3 (legacy) remains the workflow engine in SOA 5.3
- JBPM 5 (new) is delivered with BRMS 5.3
- Integration supported when both products installed together

Use BRMS Deployable distribution

Use SOA-P as deployment container

Plus jBPM5/ESB integration modules
Turns the data you have into the information you need
Augments and extends SOA Platform to address data access, integration and abstraction.
• Master Data Services
• Data Governance, Compliance
• Reporting/Analytics enablement
Real-time read/write access to heterogeneous data stores
Speeds application development by simplifying access to distributed data
Centralized access control, auditing

New in version 5.3:
✔ Additional data sources: Greenplum, Apache Hive, PostgreSQL 9
✔ Source-specific enhancements: Salesforce.com; Fixed-width files
✔ Performance optimizations: off-heap buffering
✔ Tooling/usability upgrades: Guides, cheatsheets, XML and REST-based sources
✔ JBoss Developer Studio v5.0
What's New In EDS – Apache Hive

- Hive is a "data warehouse" system for Hadoop that facilitates easy data summarization, ad-hoc queries, and the analysis of large datasets stored in Hadoop compatible file systems.

- Hive provides:
  - a mechanism to project relational structure onto this data and query the data using a SQL-like language called HiveQL
  - JDBC driver
    - not compliant: no DatabaseMetadata, limited DDL
- EDS provides:
  - Hive Translator (Tech Preview) – model Hive structure in EDS, query via SQL
What's New In EDS – Other Changes

- Server-side query timeouts
  - Both per VDB and server wide query-timeout
- Performance enhancements
  - MemoryBufferSpace controls buffer/cache memory
  - Option to allocate memoryBufferSpace OFF heap for large RAM scenarios.
- Salesforce.com data source
  - Aggregate support – GROUP BY, ORDER BY
  - Listing on SF.com AppExchange
Data Services Designer – Guides View

Categorized Action Menu

- Manage Model Projects
- Define Models
- Manage Connections
- Model Data Sources
  - Consume SOAP Web Service
  - Model JDBC Source
  - Model Flat File Source
  - Model Local XML File Source
  - Model Remote XML File Source
  - Teiid Server
- Test
- Teiid Cheat Sheets

Cheat Sheets

- Cheat Sheets for Teiid Designer use cases
  1. Create Model from JDBC Source
  2. Create Model from Flat File Source
  3. Consume a SOAP Web Service
  4. Create Model from XML Local File Source
  5. Create Model from XML Remote Source
  6. Create multi-source VDB
  7. Create and test a VDB

SUMMIT
PRESENTED BY RED HAT
Designer – Project Status View

Click for applicable actions

Hover for status summary
Consume SOAP WS – Source Definition

- **WSDL Source**
- **Connection Profile**
- **Select Port**
- **Default Service Mode**
- **Select Operations**
Consume SOAP WS – Procedure Definition

Choose Operation

Request and Response

Procedure Definition

Define Input Elements
And Output Columns

Choose Operation
Looking Ahead – SOA Platform
Support Lifecycles

**Standard Product Life Cycle**

A Standard Product Life Cycle of five years applies to most JBoss products. The Standard Product Life Cycle is also composed of two phases, Full Support and Maintenance Support. Extensions beyond the fifth year (“Extended Life Support”) are available under a separate subscription, scope of coverage, and SLA.

<table>
<thead>
<tr>
<th>Phase 1 Full Support (3 years)</th>
<th>Phase 2 Maintenance Support (2 years)</th>
<th>Phase 3 Extended Life Support (3 years)</th>
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<tbody>
<tr>
<td>Year 1</td>
<td>Year 4</td>
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<thead>
<tr>
<th>JBoss Enterprise SOA Platform</th>
<th>Full Support</th>
<th>Maintenance Support</th>
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<tr>
<td>Family</td>
<td>GA</td>
<td>Life Cycle</td>
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Post-SOA-P 5.3 (Target: Q3/CY12)
- Java 1.7 support
- Additional certifications

ESB/SOA 6.0 (Target: Q2/CY13)
- ESB Revision
- Add repository, expand governance
- Lightweight deployment/ EAP 6
- Additional tooling
Changes v5 -> v6: Themes

Ease of use
- Focus on services and service contracts
- Service composition model

Services
- Simplified programming model
- Improved developer tooling
- More support for standards and de-facto standards
- Service contracts, declarative validation and transformation
- Explicit service dependencies
- Design-time repository

Governance
- Continued interop among JBoss integration products
- Broader connectivity

Interoperability
- Based on EAP 6 – rapid startup, highly-configurable footprint
- Suitable for distributed, cloud-based deployments

Lightweight
SOA v5 -> ESB v6

- JBoss ESB -> SwitchYard
- EAP 5 base -> EAP 6 base
- JBPM 3 retired. JBPM 5 part of BRMS
- New/More Tooling
Changes v5 -> v6: JBoss ESB -> SwitchYard


- Low-level APIs
- Greater use of Apache Camel
- Many improvements

Continuity

- Same community/engineering team
- Protocols/transports, BPEL, Business Rules, jBPM 5 integration, Smooks, XSLT, HornetQ, CXF web services
- Interop between v5 and v6
Participation in Standards Efforts

**SpecSOA**
http://www.spec.org/soa

Objective: develop a standard method for comparing performance of enterprise infrastructural components that provide Service Oriented Application (SOA) architectural concepts such as Enterprise Service Bus (ESB), and Business Process Choreography (BPC), and Web Services.

**S-RAMP (OASIS SOA Repository Artifact Model and Protocol)**
http://s-ramp.org
http://github.com/governance

Objective: define common data model and APIs to store and manage SOA artifacts throughout their lifecycle.
Summary and Wrap-up
Key Takeaways

• Integration portfolio – integrated and expanding
• Lots new in v5.3
  • Intelligent, Integrated Enterprise
  • Features to tackle your integration challenges
• More on the way in v6
## Sessions to Consider

<table>
<thead>
<tr>
<th>Session</th>
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<tbody>
<tr>
<td>BOF: SOA Platform</td>
<td>Wed 1:20</td>
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<tr>
<td>What's the Big Deal about AMQP for Business Messaging?</td>
<td>Wed 2:30</td>
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<tr>
<td>BOF: EDS Platform</td>
<td>Wed 3:40</td>
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<tr>
<td>JBoss Enterprise BRMS: Combining the Power of Business Rules &amp; Business Processes</td>
<td>Wed 3:40</td>
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<tr>
<td>The Power of Data Virtualization</td>
<td>Wed 4:50</td>
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<td>Build an Intelligent, Integrated Enterprise with Red Hat &amp; JBoss Enterprise Middleware</td>
<td>Thu 10:40</td>
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<td>Real World Perspectives Panel: Integrate</td>
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<td>BOF: BRMS Platform</td>
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<td>JBoss Enterprise Middleware &amp; Big Data</td>
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<tr>
<td>SOA at Scale with SwitchYard</td>
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