

# JBossWS 3.0

## Web Service Framework

Heiko Braun  
Core Developer  
JBoss / Red Hat

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# Agenda

- The Web Service Framework
  - Key concepts
  - Supported stacks
- Stack comparison
  - Native
  - Metro / CXF
- Leverage 3.0 features
  - WS-Reliable Messaging
  - Record Management
- Question and answers

# The web service framework

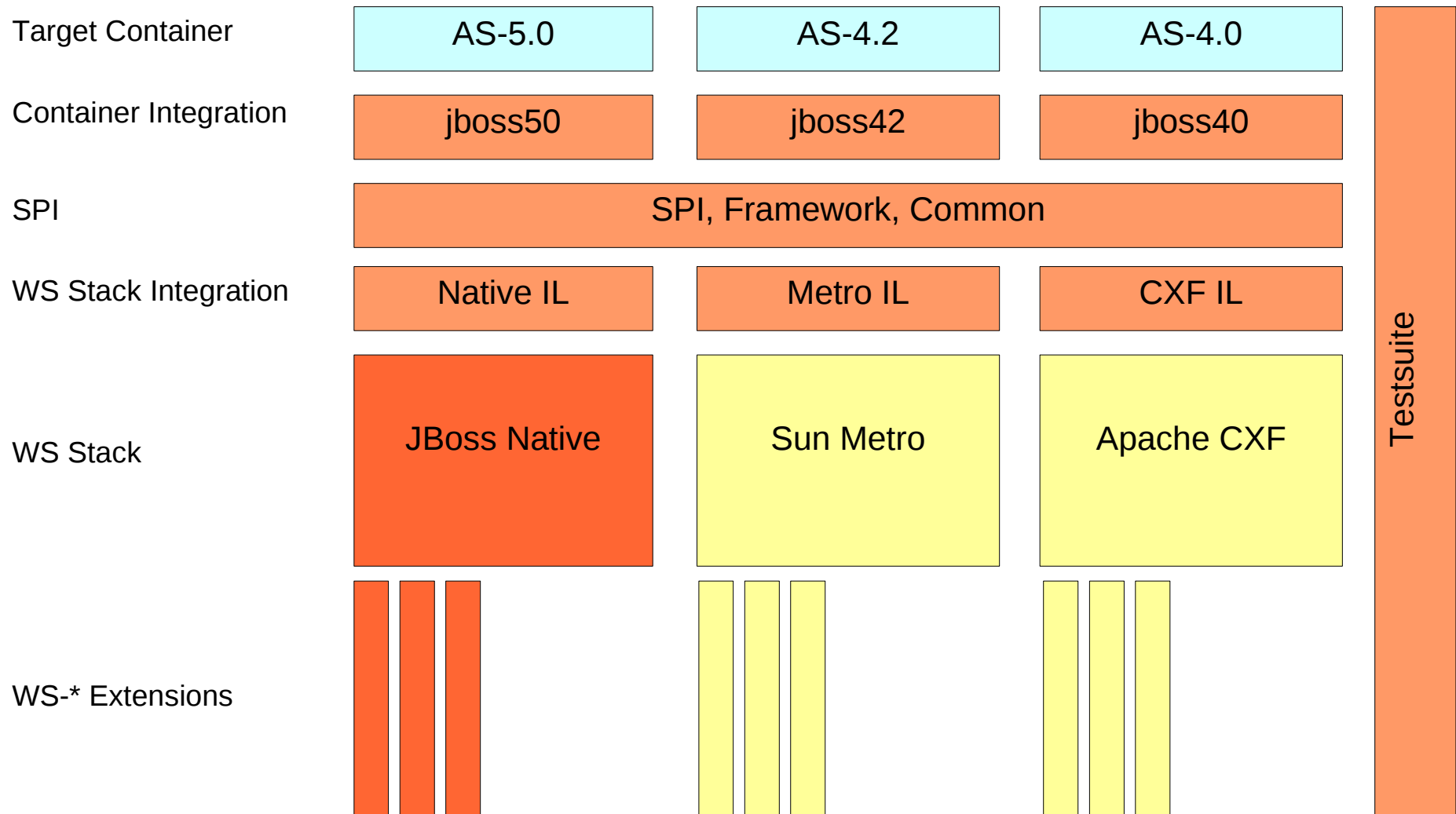
# Web Service Framework

- In Feb-2008 JBossWS introduces a general web service framework that allows for plugability of web service stacks in JBoss AS
- Supported web service stacks are
  - JBoss Native
  - Sun Metro
  - Apache CXF
- Each stack comes with it's own feature set and performance characteristics
- Users will have a choice of underlying WS stack

# Key concepts

- SPI decouples target container from actual web service stack
  - Enables plugability across target containers
- A minimum feature set required across all stacks
  - Focus on JAX-WS
  - Common test suite ensures portability
- Maintain user experience across stacks
  - Tooling
  - Programming models
  - Deployment
  - Management
- Transparent to the developer

# Project Architecture



# Release Cycle



- Minor release every 8 weeks
- First two weeks core team decides upon the feature/bug set
- Next four weeks implementation
- Last two weeks documentation and QA on all supported platforms

# Supported target containers

- We generally support the last 3 stable JBoss AS versions
  - Native, Metro, CXF is supported on 4.2 and 5.0
  - Native is also supported on 4.0
  - We drop support for 4.0 when 5.0 comes out
  - A supported container must be included in QA matrix

	jboss-4.0.5	jboss-4.2.1	jboss-4.2.2	<i>jboss-5.0.0</i>
native	x	x	x	x
metro		x	x	x
cxf		x	x	x

# Feedback

I am happy that both the GlassFish Metro and Apache CXF community and project leads endorse this move and are committed to the success of their respective stacks in JBoss.

Here is what they have to say ...

*The GlassFish community very much welcomes JBoss use of our Web Services stack (JAX-WS RI and Project Tango, now combined as Project Metro) and we look forward to feedback and synergies with the expanded developer community,*

Eduardo Pelegri-Llopart, Distinguished Engineer at Sun and lead of the GlassFish Community

## Feedback (cont.)

*We're excited that on the strength of the CXF project and its growing user base, the JBoss community has decided to incorporate CXF into its offerings for Web service integration. This move is indicative of the power of open source to drive innovation and speed the adoption of new technologies.*

Dan Kulp, Principal Engineer at IONA Technologies and Apache CXF Committer

*I'm very excited to see JBossWS take such a strong user and community centric approach. Many CXF users have been already been deploying inside JBoss due to CXF's unique capabilities and JBoss's strength as an application server. I'm excited to see this integration grow even deeper in future.*

Dan Diephouse, Founder of the XFire project

# Stack comparison

# JBossWS-Native

- JavaEE certified JAX-WS support
- J2EE certified JAX-RPC support (maintenance)
- Attachment support with XOP & SwA
- JMS Transport
- WS-Addressing
- WS-Security
- WS-Policy
- WS-Eventing
- WS-Reliable Messaging (Q1 2008)

# JBossWS-Metro/CXF

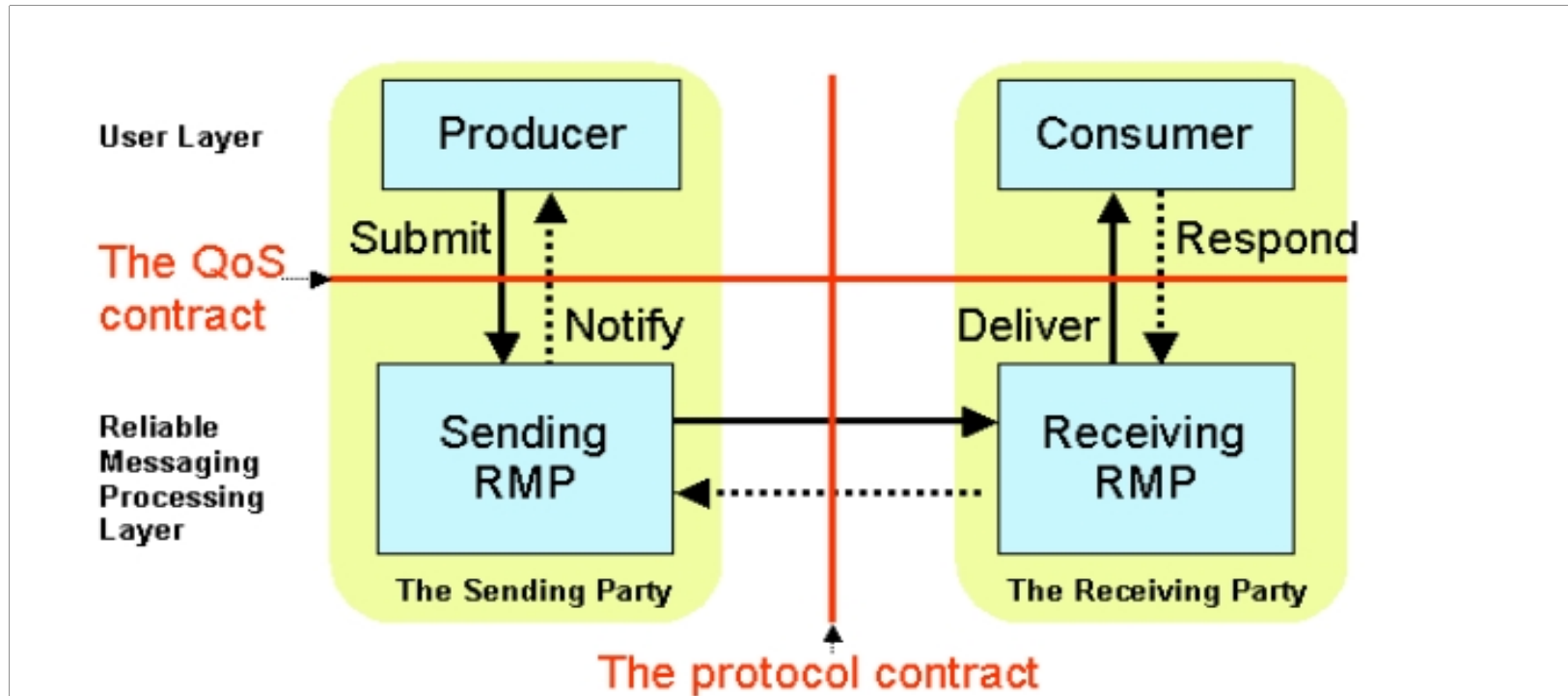
- JavaEE JAX-WS support
- Attachment support with XOP & SwA
- Both stacks offer a number of WS-\* extensions, which we will claim support for when we have corresponding tests in our automated QA environment and accompanying documentation in our Wiki
- No JAX-RPC support
- Upcoming releases are expected to unlock more WS-\* functionality from these stacks

# Leverage JBossWS 3.0

# Using advanced features: WS-RM

- **WS-Reliable Messaging**
  - Available with JBossWS-Metro
- The first WS-\* included in QA
- More to be unlocked in future releases
  - Requires test coverage, samples and documentation

# Reliable messaging overview



Enables reliable messaging between client / service

Ordered delivery

Duplicate elimination

Guaranteed receipt

# Enabling WS-RM in JBossWS-Metro

- Configuration through policy assertions (WS-Policy)
  - Express requirements and capabilities of service endpoints
- Common mechanism to any WS-\* extension in Metro
- Two options:
  - Simply deploy Metro configuration along with the endpoint:
    - `META-INF/wsit-<Endpoint impl>.xml`
  - Or add the policy expression to the WSDL (WSDL first development)

# Enabling WS-RM in JBossWS-Metro (cont.)

- WSDL excerpt:

```
[...]
<wsp:Policy wsu:Id="CalculatorWSPortBindingPolicy">
  <wsp:ExactlyOne>
    <wsp:All>
      <wsaws:UsingAddressing/>
      <wsrm:RMAssertion/>
    </wsp:All>
  </wsp:ExactlyOne>
</wsp:Policy>
```

(I.e. META-INF/wsit-foo.bar.Endpoint.xml)

# Record management overview

- Available for all supported stacks
- Logging request and response messages
  - Record messages received from and sent to a given service consumer
  - Creation date
  - Source host
  - Destination host
  - Message type (in/out)
  - Invoked endpoint operation

# Record management use cases

- Accountability
  - Service providers may want to know which consumers are actually hitting a given service
- Statistics, record filtering
  - Last records related to messages coming from a given customer and the response the system gave them
- Exposed through the JMX console or by JBossWS SPI

# Extending the record management

- Current implementation: `MemoryBufferRecorder`
- Write your own processors and plug them into `JBossWS`
- Simply implement

`org.jboss.wsf.spi.management.recording.RecordProcessor`

```
public interface RecordProcessor
{
    boolean isRecording();
    void setRecording(boolean value);
    void processRecord(Record record);
    [...]
}
```

# Project status and roadmap

# Project Status

- **Roadmap**
  - WS-RM for JBossWS-Native in Q1
  - More samples and tutorials
    - Especially WS-\* (WS-Trust, WS-TX, etc)
  - Tooling: IDE integration, CXF tools
    - WS project generator, similar to seamgen
- **What you can do**
  - Feedback on the stacks
    - Separate user forums for Metro and CXF
  - Preferred Stack?

# Related topics at JBW

- “Advanced Enterprise Server Bus”
  - Kevin Conner / JBoss
- “Real World SOA”
  - Chris Haddad / Burton Group
- “Practical SOA”
  - Max Yankelevich, Vivat

# Q & A

Visit <http://labs.jboss.com/jbossws>, [hbraun@redhat.com](mailto:hbraun@redhat.com)