Getting started with FUSE in SWIM

Open Source Middleware Adoption

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Agenda

- Introducing FuseSource.com

- Adopting FUSE in SWIM

- Additional Resources

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About the presenter: Rich Newcomb

- Principal Consultant at FuseSource (Progress Software)

- Helps teams to succeed with Apache products supported under the FuseSource umbrella

- More than 15 years focused on creating distributed, scalable, component-based and service-oriented solutions

- 2+ years experience with the SWIM Program

- Consultant, Technical Team Lead, Instructor

- Speciliaties:
  ActiveMQ, ServiceMix, CXF, Camel, Maven, Web Services, SOA, OSGi, Spring Framework, SOAP, WSDL, WS-Security, SAML, UDDI, ebXML Registry, Axis, JAX-WS, Agile, XP, Scrum, RUP, Java, JEE, Open Source, C++, CORBA, Middleware, Integration

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Introducing FuseSource Corp.

- Wholly-owned subsidiary of Progress Software

- Dedicated engineering, support, services, sales and marketing

- Independent management and decision making

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What Is FuseSource all About?

- Leaders in enterprise integration and messaging

- Enterprise versions of popular Apache projects

- Focus on community

- Value-added support subscriptions

- Value-added training & services

- Employs key leaders and contributors; "we wrote the code"

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Who is FuseSource? Community Leadership

ServiceMix	ActiveMQ	Camel	CXF
Hiram Chirino (PMC)	Jon Anstey	Jon Anstey (PMC)	Sergey Beryozkin
Rob Davies (CF, PMC)	Tim Bish	**Hiram Chirino (CF, PMC)**	Ulhas Bhole
Freeman Fang	Dejan Bosanac	**Rob Davies (CF, PMC)**	Freeman Fang
Guillaume Nodet (PMC)	**Hiram Chirino (CF, PMC)**	Claus Ibsen (PMC)	Eoghan Glynn
James Strachan (CF)	Chris Custine	Willem Jiang (PMC)	Willem Jiang (PMC)
Gert Vanthienen (PMC)	**Rob Davies (CF, PMC)**	Guillaume Nodet (PMC)	Peter Jones
Hadrian Zbarcea	Willem Jiang	**James Strachan (CF)**	Eric Johnson
	Guillaume Nodet (PMC)	Gary Tully	Guillaume Nodet (PMC)
	James Strachan (CF, PMC)	Gert Vanthienen	Sean O'Callaghan
	Gary Tully (PMC)	Hadrian Zbarcea (PMC)	Ajay Paibir
	Gert Vanthienen (PMC)		James Strachan (PMC)
	Hadrian Zbarcea (PMC)		David Valeri

CF = Project Co-Founder; PMC = Project Management Committee

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FuseSource: Support and Services for the Leading Open Source Integration & Messaging Projects

- Apache ActiveMQ: Message Broker

- Apache CXF: Web Services, SOAP

- Apache Camel: Enterprise Integration Patterns
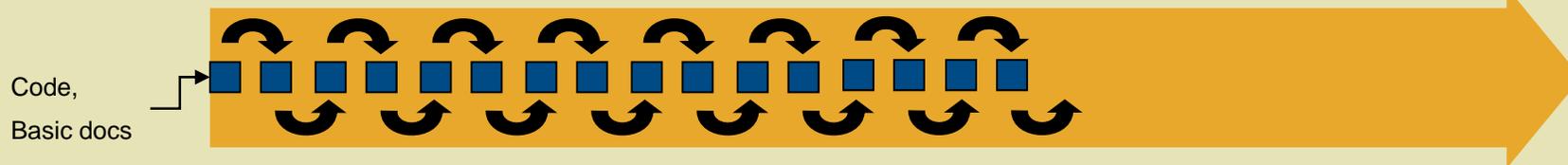
- Apache ServiceMix: ESB with OSGi and JBI

Distributed under a permissive, non-viral Apache 2.0 License

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Regular, Stable Releases...

Apache

Frequent (often daily) snapshot releases

Highly collaborative development

Developer-driven process in Apache community

Test, documentation follow release, are driven by community
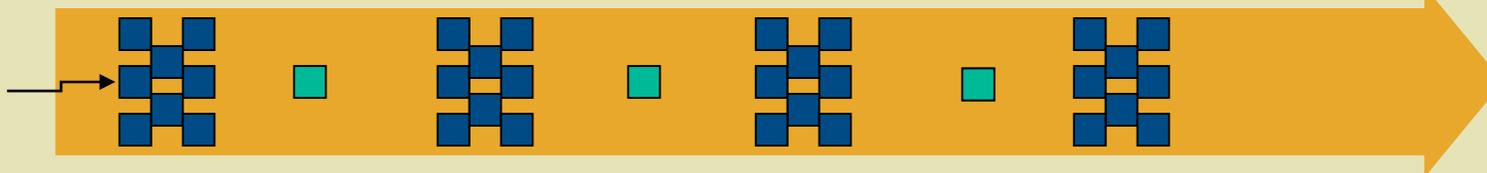
Code,
Basic docs

Core development occurs within the Apache community

Community releases are more "cutting edge"

FuseSource adds testing, QA, docs, extras

Patches for customers are returned to community

Additional documentation and extras also contributed

Regular, stable, tested & supported releases

"Product-oriented" development

End-user focused process, thru feedback in FUSE community

Test, documentation etc. are part of release

Code

Docs

Demos

Test

Interop

Support

Licensing

Assurance

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What does "FuseSource Corp" mean for SWIM?

- Re-branded organization (full subsidiary of Progress Software)

- Same supported products from Apache

- Same great engineering, support, and consulting teams

- Dedicated organization and resources enables:

>> **Deeper interaction among engineering, support, and consulting**

>> **Even better customer focus**

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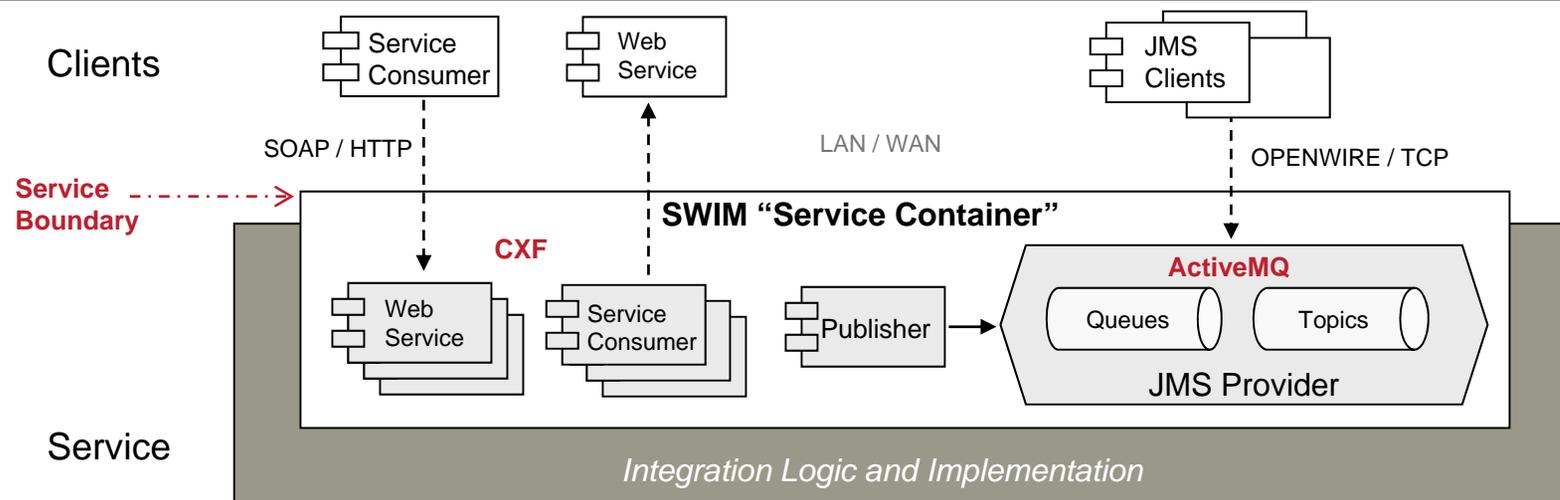
Getting Started with FUSE in SWIM

- Start Small with CXF and ActiveMQ
- Add Camel for enterprise integration patterns & routing
- Adopt the ESB pragmatically
- Know where to get help

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Prerequisites

- Java, Maven, Spring - if you don't have these skills, be prepared to get them
- Open standards
  - JMS
  - SOAP and WS-*
  - OSGi

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Start Small !

- Start with CXF and ActiveMQ

- These are the architecturally-significant elements for conformance to the SWIM "Service Container" policies

- Service providers: First create mock service implementations using standalone CXF and ActiveMQ servers

- The eventual host platform can be selected independent of the service endpoint design (WSDLs, etc.) and implementation

Clients

| Service Consumer | Web Service | | JMS Clients |

SOAP / HTTP
LAN / WAN
OPENWIRE / TCP

Service Boundary

SWIM "Service Container"

CXF

Web Service

Service Consumer

Publisher

ActiveMQ

Queues Topics

JMS Provider

Service

Integration Logic and Implementation

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Add Camel for Enterprise Integration Patterns and Message Routing

- Apply Camel routes to/from CXF and ActiveMQ endpoints for integration patterns and message routing
  - Camel can help to isolate business logic from integration logic
  - Camel provides integration adapters to *lots* of technologies
  - Camel does not introduce a dependency upon any ESB-specific technology (e.g., JBI / NMR, OSGi)
  - Camel enables easy migration to an ESB-hosted solution later on

- CXF + Camel = Lightweight integration layer

- ActiveMQ + Camel = "Smart" JMS Topology

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Adopt FUSE ESB …. pragmatically

- **Migrate to the ESB when:**
  - You're ready to *implement* business or integration logic using a service-oriented approach
    - OSGi services = SOA on the JVM   [recommended!]
    - Java Business Integration (JBI)
  - You want to deploy on a single platform that natively supports CXF, Camel, ActiveMQ, etc.
  - You want to use service bus quality of service capabilities in your integration or application (e.g., clustering, security, etc.)
  - You want to use the provisioning and management features of the ESB
  - You like the general capabilities of an OSGi platform
  - You understand OSGi bundles and are prepared to work within the OSGi framework

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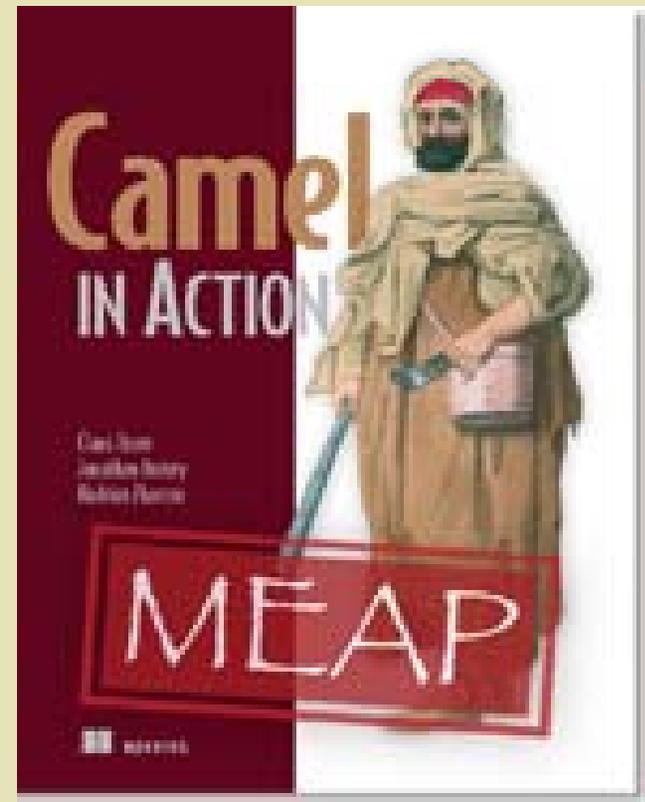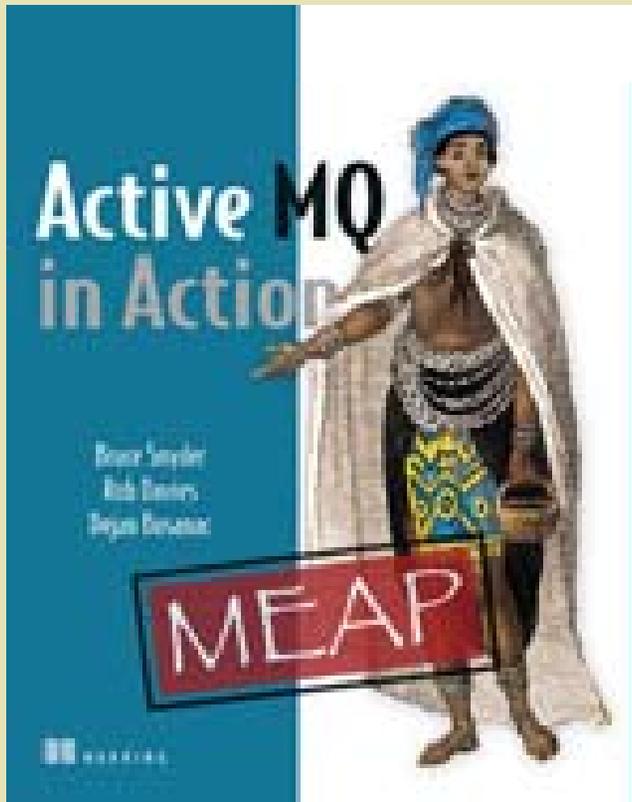# Adopt FUSE ESB …. pragmatically

- **Defer the ESB decision when:**
  - You're fully vested in a different lightweight deployment platform / container that is already managed by your production IT department (e.g., Tomcat)
    - Note: You can deploy CXF-based solutions into any Java Web Container
      …. but may require a little manipulation of the Classpath on a web server
  - You're just sending JMS messages and need a little bit of routing logic
  - You're not quite ready to invest in OSGi

- **Remember: with FUSE you can migrate to the ESB without rewriting code in later iterations**

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Know where to get help

- **Apache User's Groups** – Great for semi-quick responses to simple questions; lots of searchable content (via Nabble). Be part of the community.

- **FuseSource Jira** – For support customers. Fast answers to any FUSE-related question and deep interaction with FUSE support and engineering team. Reliable help for solving your hardest problems.

- **Source Code** – Many questions can be answered by reviewing the source. Always check out the examples and test cases related to your area of work. You'll be surprised how much you will learn. Use the source, Luke!

- **FuseSource Consulting** – We're invested in SWIM and ready to help.
  - Training
  - Architecture Consulting & Reviews
  - Hands-on Development

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Additional Resources

MEAP = Manning early access program

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