Past, Present and Future of Apache Camel

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http://fusesource.com
Your Presenters

- Claus Ibsen and Jonathan Anstey
- Principal Engineers at FuseSource
  [http://fusesource.com](http://fusesource.com)
- Committers on various Apache projects, most importantly, Apache Camel!
- Authors of Camel in Action
Agenda

- How we got here
- Where Camel is today
- Camel's "cloudy" future
Integration is hard

- Multiple **applications** talking over multiple **transports** on multiple **platforms** = PAIN!
- Pain mostly due to
  1. Coming up with good solutions to messaging problems
  2. Coding against specific APIs and transports for each integration point
Enterprise Integration Patterns to the rescue!
Some of the patterns...

### Message Routing

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Based Router</td>
<td>How do we handle a situation where the implementation of a single logical function (e.g., inventory check) is spread across multiple physical systems?</td>
</tr>
<tr>
<td>Message Filter</td>
<td>How can a component avoid receiving uninteresting messages?</td>
</tr>
<tr>
<td>Dynamic Router</td>
<td>How can you avoid the dependency of the router on all possible destinations while maintaining its efficiency?</td>
</tr>
<tr>
<td>Recipient List</td>
<td>How do we route a message to a list of (static or dynamically) specified recipients?</td>
</tr>
<tr>
<td>Splitter</td>
<td>How can we process a message if it contains multiple elements, each of which may have to be processed in a different way?</td>
</tr>
<tr>
<td>Aggregator</td>
<td>How do we combine the results of individual, but related messages so that they can be processed as a whole?</td>
</tr>
<tr>
<td>Resequencer</td>
<td>How can we get a stream of related but out-of-sequence messages back into the correct order?</td>
</tr>
</tbody>
</table>
But I still have to code the EIPs and connect to all those transports and APIs...
Enter serial project creator, James Strachan
1st commit

- 1st Camel commit, James Strachan:

r519901 | jstrachan | 2007-03-19 - Initial checkin of Camel routing library
Introducing Apache Camel

- Open source integration framework that makes integration easier by having:
  - Implementations of the Enterprise Integration Patterns (EIPs)
  - Connectivity to many transports and APIs
  - Domain Specific Language (DSL) to wire EIPs and transports together
How we got involved...
Developer in St. John’s, Newfoundland
Drinking the open source kool aid
Patient with integration pain...
... a Silver bullet to the rescue
Easier integration as medicine

Proof of Concept
Looking at various products...
One product stood out...
We were hooked...
If this is the new corporate attire, I’m quitting!

This pillow is a surprisingly comfy hat
1st commits

r640963 | davsclaus | 2008-03-25 - Added unit test for mistyped URI

r693569 | janstey | 2008-09-09 - CAMEL-887 - Update to release version of Google Guice
Growing Camel community needed a resource for beginners and experts alike

- Started mid 2009
- Finished Dec 2010
- 552 pages
Discovering drawbacks of the name

PLAYER ONE  88888888
PLAYER TWO  88888888
NEXT ZONE 00 KM

REVENGE
OF THE MUTANT CAMELS

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camel book

About 63,600,000 results (0.29 seconds)

Programming Perl, 3rd Edition - O'Reilly Media
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8 Jun 2011 – Any Perl book can have a title, but only this book is affectionately known by all Perl programmers as "The Camel." This third edition of ...

Programming Perl - Wikipedia, the free encyclopedia
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From Slashdot book review

Camel Book (Score:5, Informative)
by Anonymous Coward on Wednesday May 25 2011, @02:47PM (#36242204)

There is only one Camel Book [oreilly.com]

Programming Perl (Score:4, Informative)
by buglista (1967502) on Wednesday May 25 2011, @03:09PM (#36242452)

has been "the Camel book" since at least 1997, which is when I acquired my copy. Now get off my lawn.

Re:Programming Perl (Score:1)
by Mindcontrolled (1388007) on Wednesday May 25 2011, @04:31PM (#36243490)

Indeed. We have some positively heretic [[ ]] going on here. Burn em at the stake!
Cuba + Camel In Action

Ola Amigos!

So I spent two weeks in Holguin Cuba on vacation in April. Very nice place. Even nicer when you have a brand new copy of Camel in Action by Claus Ibsen and Jon Anstey. I had the opportunity to meet both Claus and Jon in Washington, D.C. at the Camel One conference. If you haven’t heard of Apache Camel 4.bp.blogspot.com/-22f3A0Zfrd0/Td29Dk-m0tl/.../248287_10150197645044629_503604628_6693655_1715081_n.jpg
Apache Camel: Current state of the beast
A community still growing

- 2nd annual CamelOne conference
- 80-100K artifact downloads per month
- 120K website views per month
- 1000 user mailing list posts per month
- Multiple companies offering commercial Camel support
Quarterly website visits

Website visits

<table>
<thead>
<tr>
<th>Year, Quarter</th>
<th>2009, Q1</th>
<th>2009, Q2</th>
<th>2009, Q3</th>
<th>2009, Q4</th>
<th>2010, Q1</th>
<th>2010, Q2</th>
<th>2010, Q3</th>
<th>2010, Q4</th>
<th>2011, Q1</th>
<th>2011, Q2</th>
<th>2011, Q3</th>
<th>2011, Q4</th>
<th>2012, Q1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Website visits</td>
<td>50000</td>
<td>100000</td>
<td>150000</td>
<td>200000</td>
<td>250000</td>
<td>300000</td>
<td>350000</td>
<td>400000</td>
<td>330000</td>
<td>350000</td>
<td>370000</td>
<td>390000</td>
<td>410000</td>
</tr>
</tbody>
</table>

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User list posts

User posts

- 2007: 0
- 2008: 1000
- 2009: 2000
- 2010: 3000
- 2011: 8000
Fuse IDE

![Fuse IDE Diagram](image)
Camel’s “Cloudy” Future
Camel’s “Cloudy” Future

- We envision Camel being used for integration everywhere

- In the cloud, in the data center, and on the devices of the future
Enter Fuse Fabric

Fuse Fabric

- Apache licensed open source software – built by the FuseSource team
- Provides a framework for configuring, provisioning and running Fuse and Apache integration software on any number of machines
Fuse Fabric

- Camel Endpoints
- Camel Endpoints
- FuseMQ Cluster
- Runtime Registry
- Fuse ESB
- Fuse ESB
- Fuse IDE
- Fuse Management Console

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Camel Fabric Discovery & Loadbalancing

- Exposing Camel endpoints into the fabric
  - from("fabric:myName:jetty:http://0.0.0.0:8181").to("bean:foo1");
  - from("fabric:myName:jetty:http://0.0.0.0:8182").to("bean:foo2");
  - ...

- Invoking a remote Camel endpoint
  - from("direct:bar").to("fabric:myName");
Fuse management console

FuseSource

Containers Profiles Users

Containers

Create Fuse Container Migrate Containers

Name Active Provisioned Version
FuseManagementConsole ✓ ✓ 1.0
camel1 ✓ ✓ 1.0

camel1

Type: Managed Container
Profiles: camel
Location:
Local IP: 192.168.2.13
Local Hostname: 192.168.2.13
Public IP:
Public Hostname:
Manual IP:
Resolver: Local Hostname
Provision Status: Success
5th birthday of Camel

- The Apache Camel project turned 5 in March 2012
Useful references

- FuseSource - http://fusesource.com
- Fuse Management Console
- Camel in Action - http://manning.com/ibsen
Any Questions?

No vendor lock-in

Free to redistribute

Enterprise class....