



Bndtools 101

Getting Started with OSGi Development

“Why Use OSGi?”

– Many Java Developers

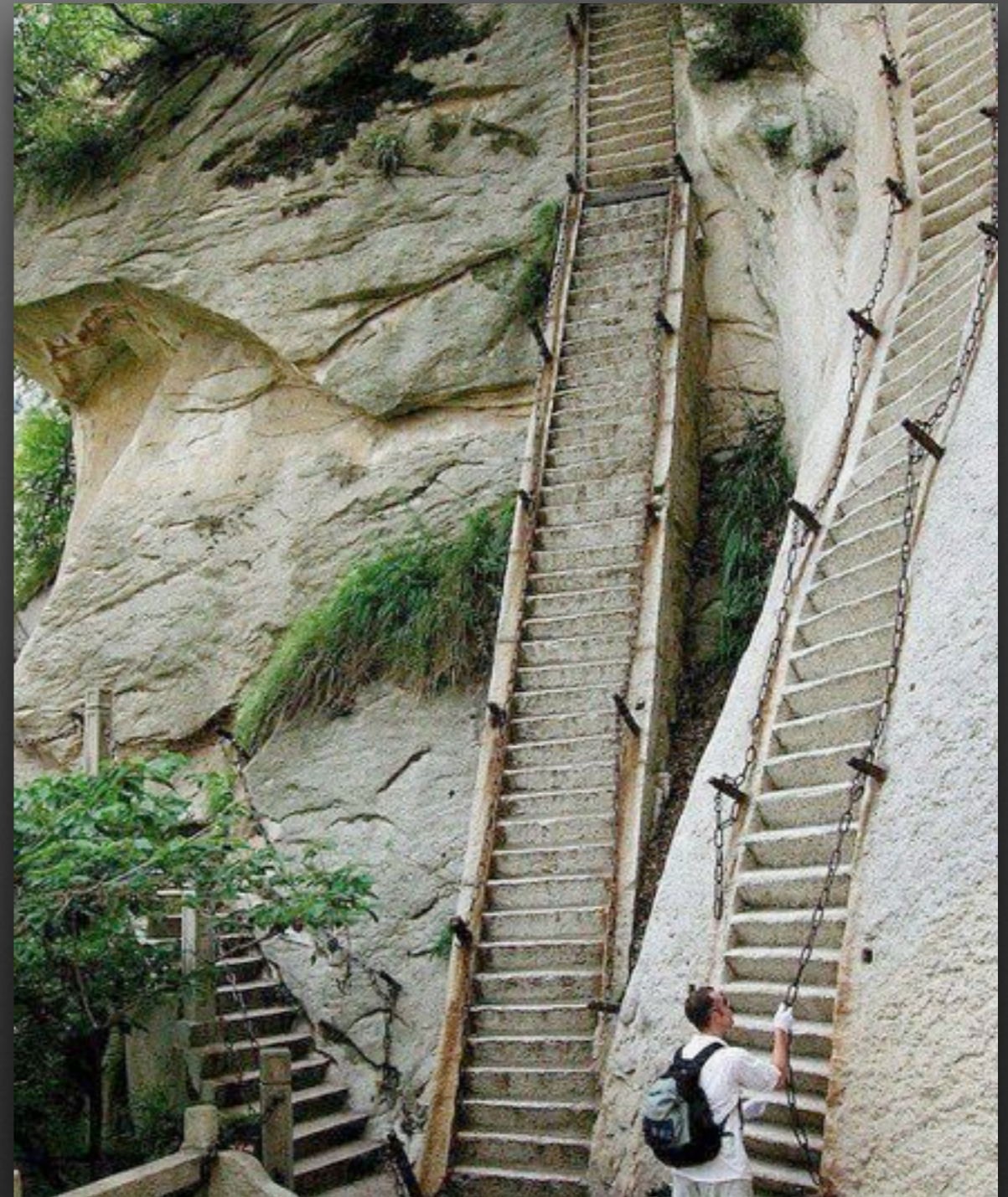
OSGi is From the Future

- Microservices since 1998
- Continuous delivery since 1999
- Software component repositories since 2003
- Runtime resolve/assemble since 2005



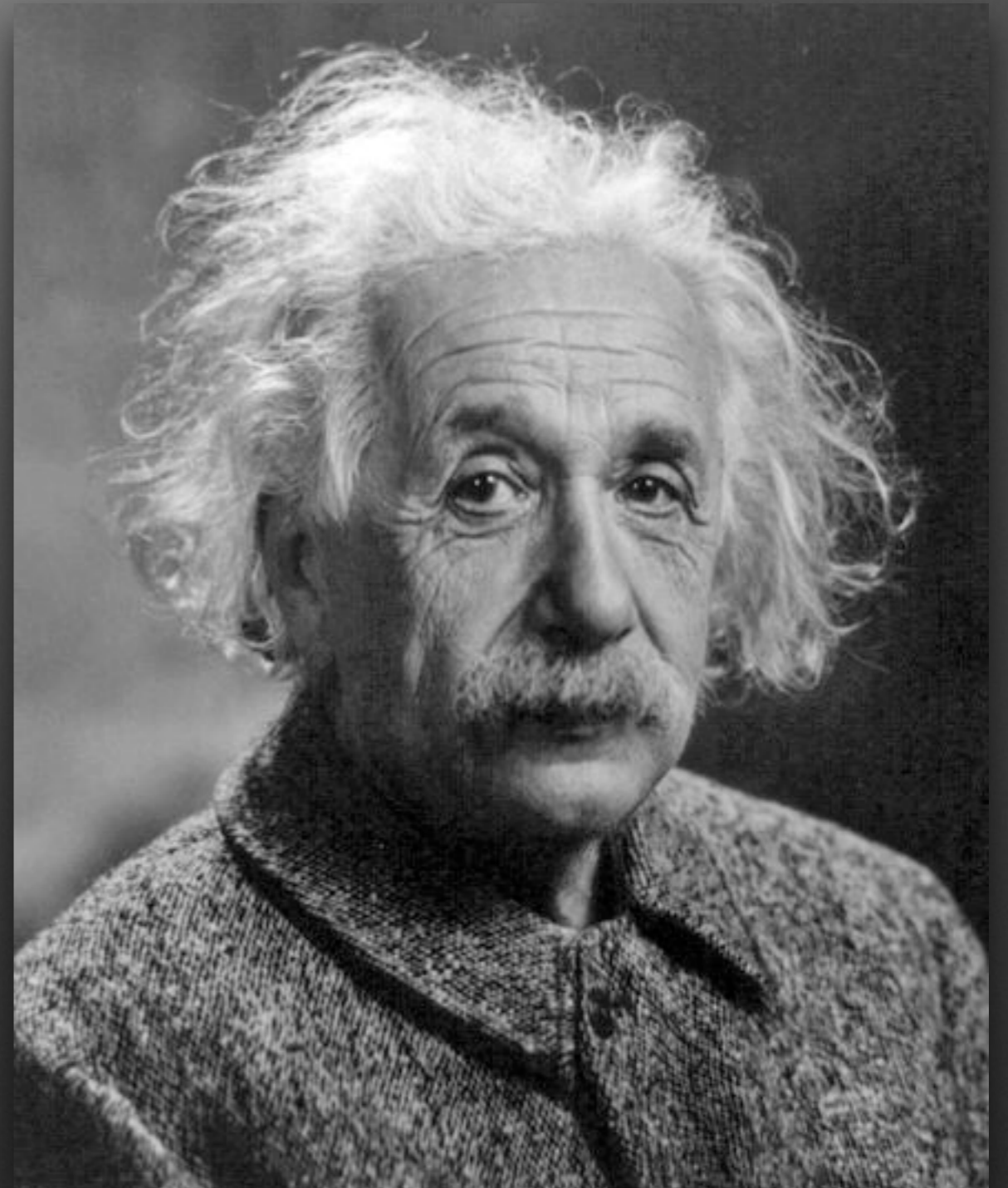
Why Aren't We All Using It?

- Steep Learning Curve...?
- Complexity...?
- Weak Tools...?



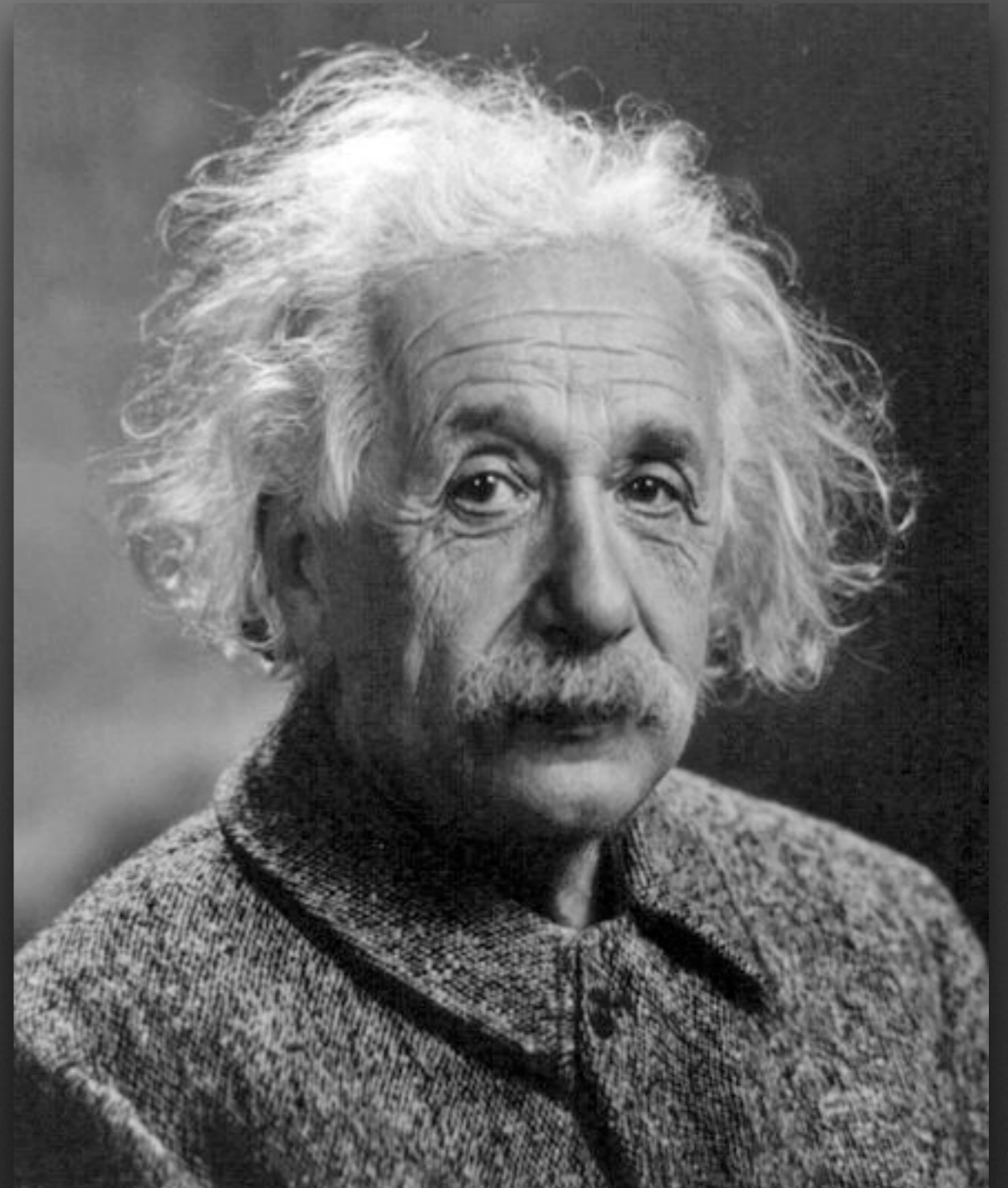
Famous Dude

- “Things should be as simple as possible, but *no simpler*”



Actually He Said...

- “It can scarcely be denied that the supreme goal of all theory is to make the irreducible basic elements as simple and as few as possible without having to surrender the adequate representation of a single datum of experience.”



Inherent vs Accidental Complexity





OSGi Really Is “As Simple as Possible”

Holy Sh*t We Needed Better Tools!



Bndtools

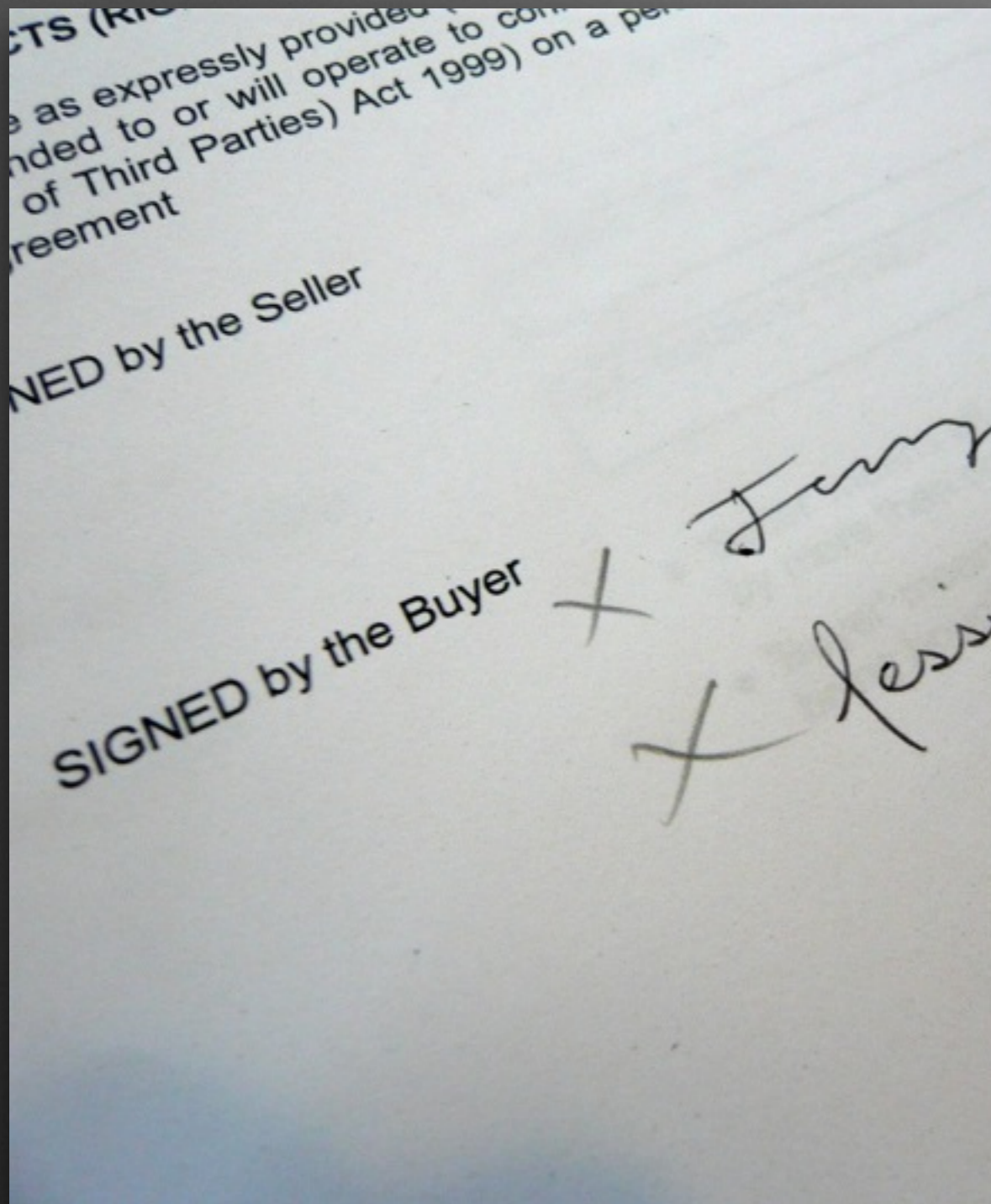
“One tool to bnd them all”

0. Initial Setup

- Create Workspace Config
- Setup Repository



1. Define API



- Blog
- BlogListener
- Baseline
- Release

2. Create Provider

- Add `blog.api` to build path.
- Add MongoDB client from JPM.



3. Run It!



- Add blog.provider to Run Requirements
- Resolve and Run

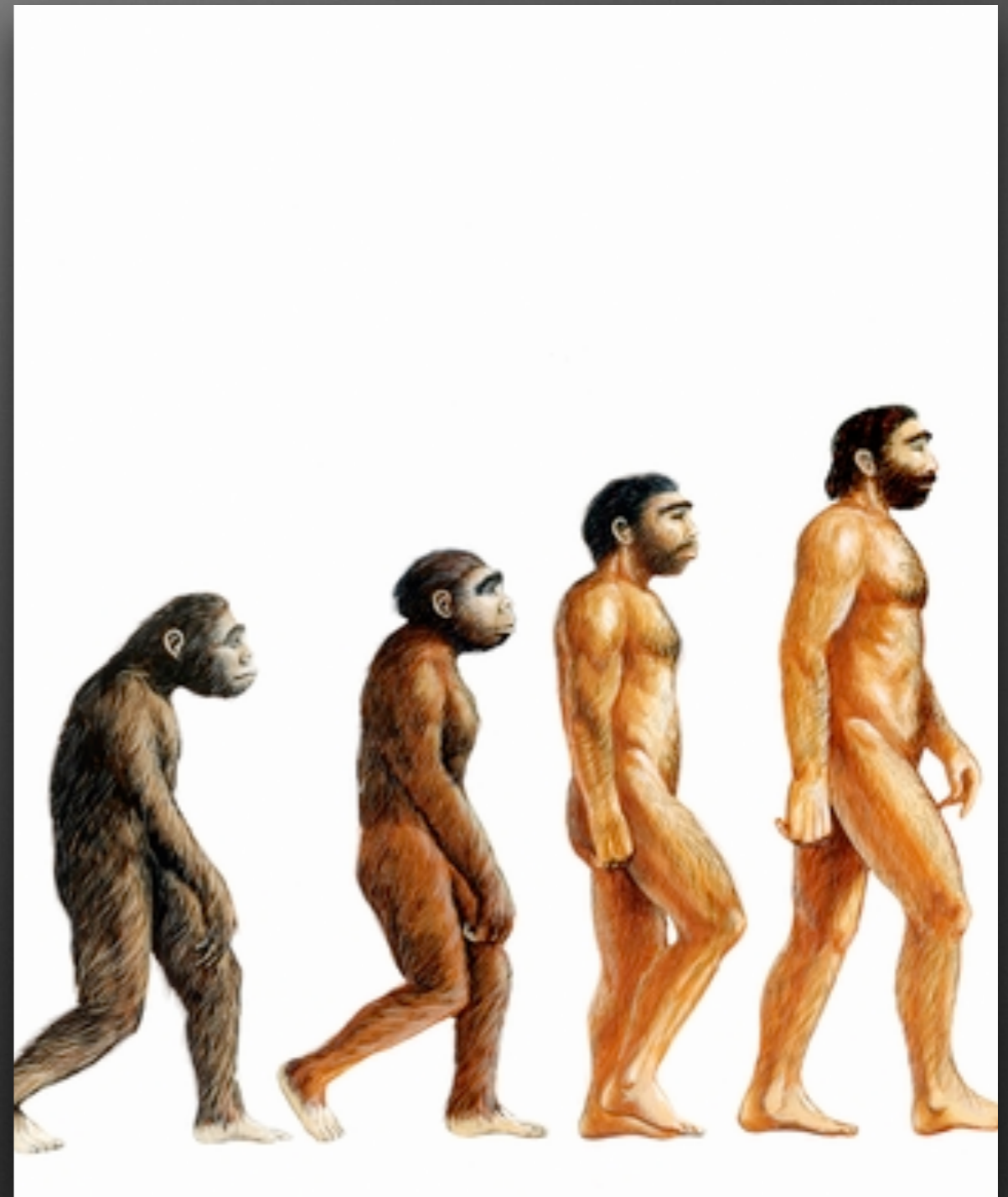
4. Create Consumer

- Add blog.api and servlet 2.5 API to build path
- Publish Servlet service
- Add service property: alias= /blog
- Add HTTP whiteboard & event admin to Run Requirements



5. Evolve the API

- Add deleteEntry() method to Blog
- Fix the baselining errors
- Release

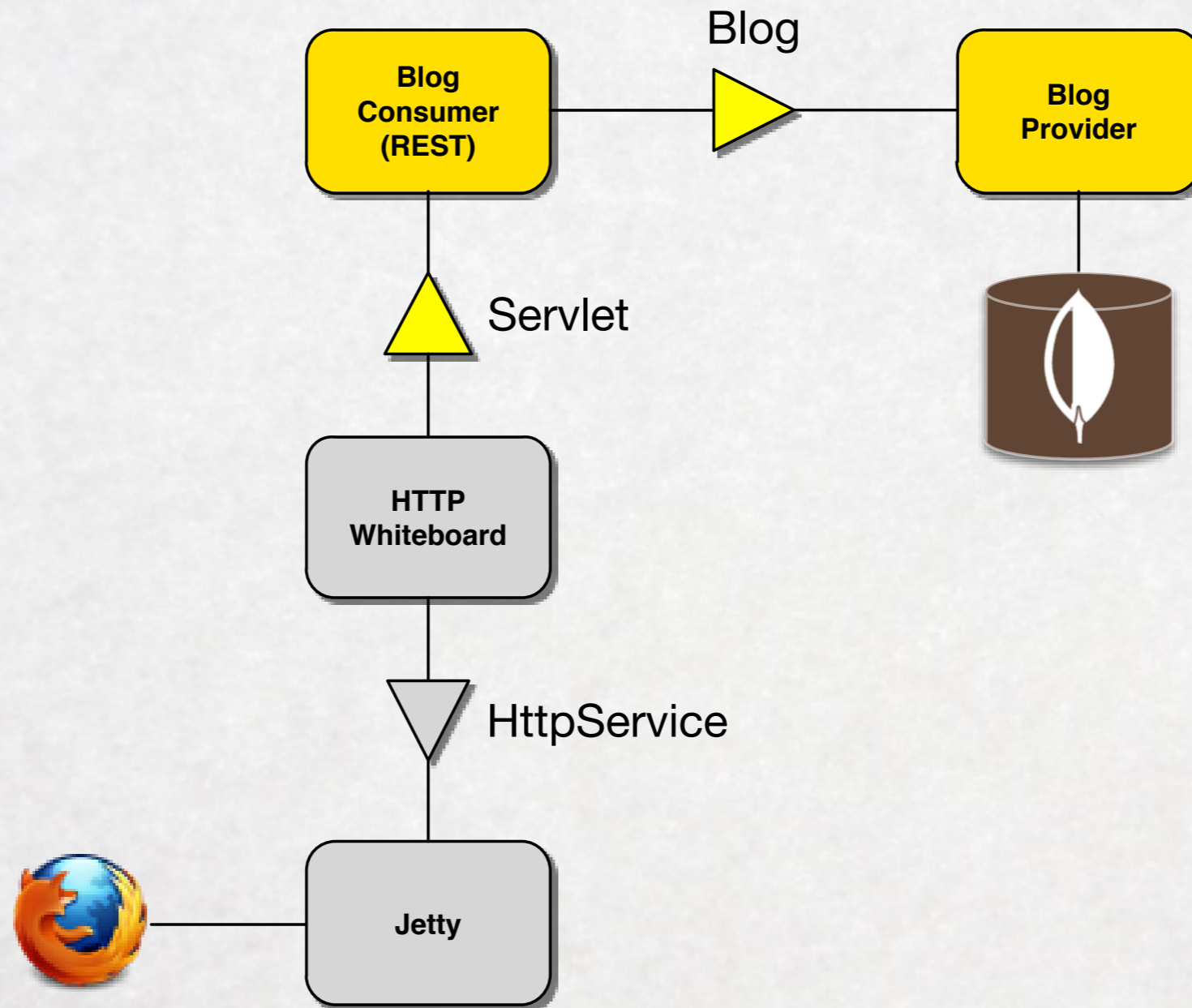


6. Package and Ship It



- Export as standalone JAR
- Run from bash

What Did We Make?



What Did We Make?

- A modular, dynamically assembled, type-safe, versioned microservice.
- ... in 45 minutes (give or take)

Over to You



- Bndtools 2.4 M1 Just Released: bndtools.org
- Demo Sources: github.com/bndtools/101

Install Bndtools

Bndtools supports all versions of Eclipse from 3.7 "Indigo" up to and including 4.3 "Kepler". Eclipse 4.4 "Luna" milestones are not officially supported, but expected to work (please [report issues](#) if not).



[Try out Bndtools 2.4.0 Milestone 1! »](#)

Via Marketplace

The recommended way to install Bndtools.

[View details »](#)

Via Update Site

Use the update site if your Eclipse installation does not include the Marketplace client.

[View details »](#)

Thanks!



**The Bndtools Team,
Working Hard(ly)**