

The Java Ecosystem Needs You!

Ben Evans

About Me

- Co-founder & Tech Fellow, jClarity
- Java Champion & JavaOne Rock Star Speaker
- Java Community Process Executive Committee
- London Java Community
 - Organising Team, Co-founder, AdoptAJSR & AdoptOpenJDK



About Me



[美] Benjamin J. Evans & David Flanagan 著

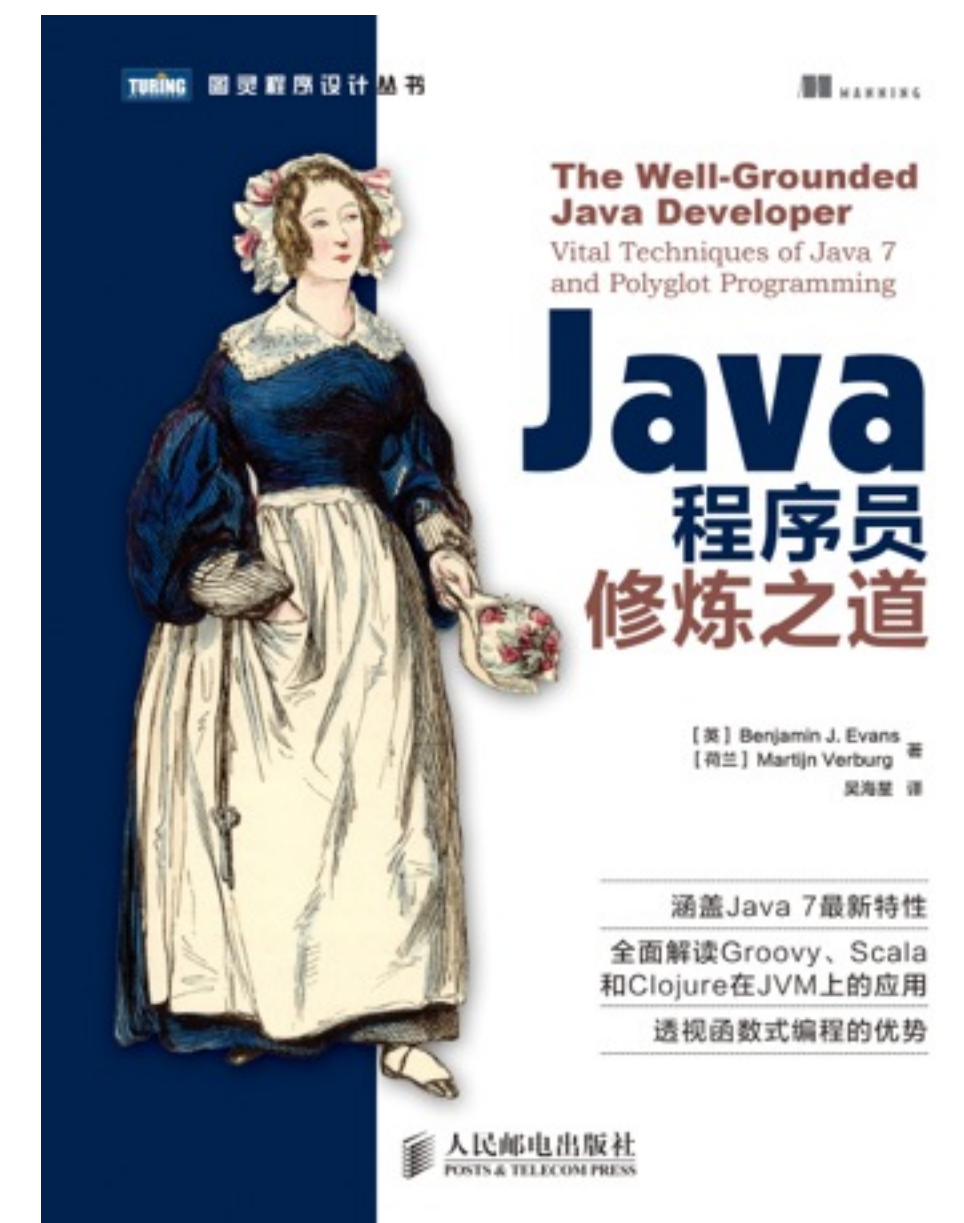
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NEW BOOK (2015)

Java权威技术手册（第6版）

预计出版日期：**2015年6月**

- Java in a Nutshell (6th Edition)
- Introduction to Java 8
- The Well-Grounded Java Developer
- Practical Java Performance (forthcoming)
- Previously:
 - Deutsche Bank - Chief Architect (Listed Derivatives)
 - Morgan Stanley - MATRIX, Google IPO, Dodd-Frank
 - SportingBet - Chief Architect



Happy Birthday, Duke!



Not Only That

- It's almost 10 years since Java was released as open-source
- More reasons to celebrate...

What's The Catch?

- Future of Java is in the hands of a relatively small group of developers
 - Mostly employed by vendors
 - Oracle
 - IBM
 - Red Hat
 - Other major vendors

Does It Matter?

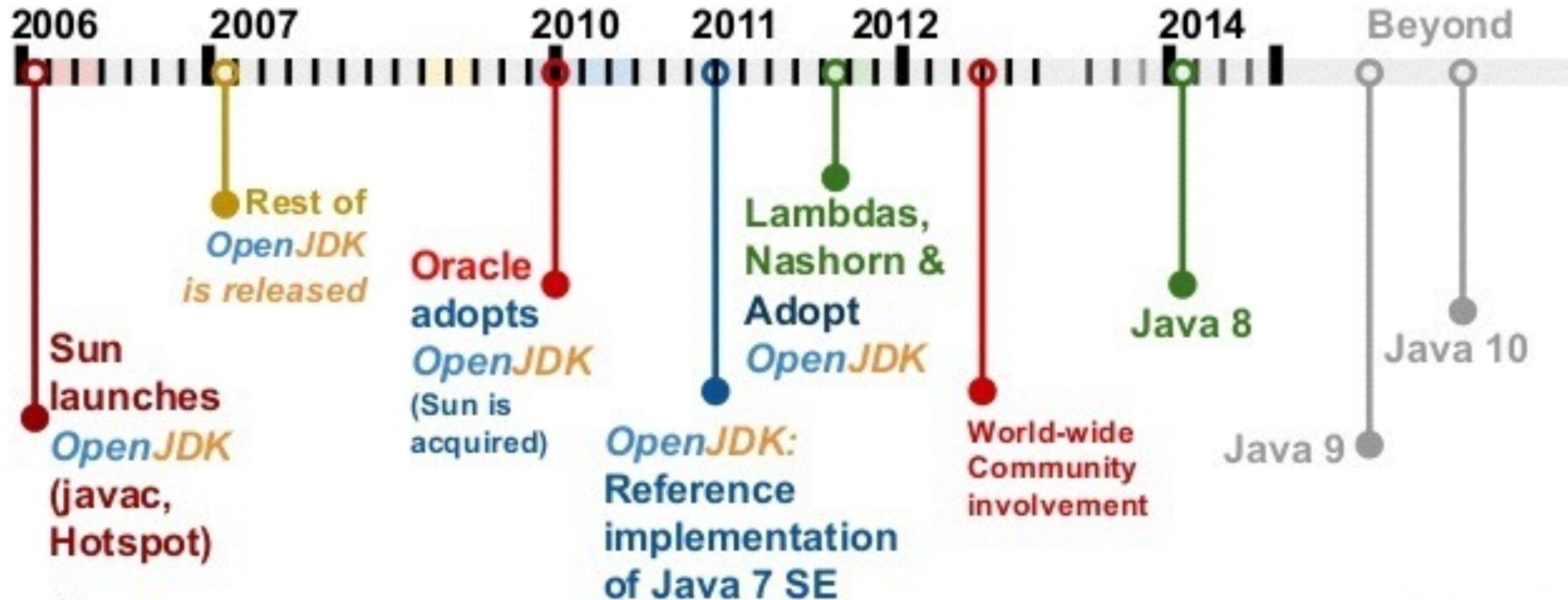
- Experience shows that standards that involve end user devs
 - Are a better fit to what's needed
 - Are more widely adopted
- Ultimately - better standards for us all...

What Can We Do?

- A group of developers have started trying to help
- We have 3 projects
 - AdoptOpenJDK - work on the platform itself
 - AdoptAJSR - work on in-progress new Java standards
 - May or may not form part of the core platform
 - Adoption - Official OpenJDK group that aids OpenJDK projects
 - Lower barriers to contribution.

Some History

OpenJDK history...



ORACLE

Adoption

- Dalibor Topic (Oracle) (Leader)
- Daniel Bryant (OpenCredo)
- Edward Wong (Deutsche Bank)
- Martijn Verburg (jClarity)
- Mani Sarkar (Independent)
- Mario Torre (Red Hat)
- Rory O'Donnell (Oracle)
- Steve Poole (IBM)

Initial Successes

- Java 8 Date & Time
- Lambdas Hackdays
- Cloudbees Testing
- 50 OSS Projects forward-tested on JDK 8

What's Current?

- Java EE 8
- Java SE 9
 - Modularity Hackdays
 - REPL Hackdays
- Build Infrastructure
- Code Coverage for Java SE
 - JUGs & Adoption made this happen!
- New Tools - Betterrev, JITWatch

Java SE 9

- 102 Process API Updates
- 110 HTTP/2 Client
- 143 Improve Contended Locking
- 158 Unified JVM Logging
- 165 Compiler Control
- 199 Smart Java Compilation, Phase Two
- 212 Resolve Lint and Doclint Warnings
- 215 Tiered Attribution for javac
- 219 Datagram Transport Layer Security (DTLS)
- 221 Simplified Doclet API
- 222 jshell: The Java Shell (Read-Eval-Print Loop) - REPL

Java SE 9 (Continued)

- 223 New Version-String Scheme
- 226 UTF-8 Property Files
- 227 Unicode 7.0
- 228 Add More Diagnostic Commands
- 230 Microbenchmark Suite
- 232 Improve Secure Application Performance
- 235 Test Class-File Attributes Generated by javac
- 240 Remove the JVM TI hprof Agent
- 241 Remove the jhat Tool
- 243 Java-Level JVM Compiler Interface
- 245 Validate JVM Command-Line Flag Arguments

New Initiatives

- Look at some of these JEPs more closely
 - Provide targeted feedback to project lead
 - Make better standards in a high impact area
 - Significant uplift to the core Java platform

HTTP / 2

- A new HTTP standard



Why is HTTP / 2 Important?

- HTTP/1.1 has significant problems
 - Head-of-line blocking
 - Restricted connections to a single site
 - Overhead of control headers
- HTTP / 2 is a re-imagining
 - Binary
 - Fast
 - Optimized for the needs of large, high-volume websites

Why does HTTP / 2 Matter for Java?

- Java's support for HTTP clients comes from a different era
 - Protocol agnostic
 - Based on best ideas at the time
 - HTTPS is an afterthought
- But the world has changed
 - HTTPS is everything (with HTTP as legacy)

An Opportunity to Fix Things

- HTTP/2 is a core piece of Java functionality for next decade
- Revisit our old assumptions
 - “Second bite of the cherry”
- Also, produce test cases that can be used for interop
 - Not just Java
 - We all have to talk to each other
 - BDD?

Simple Sample

```
HttpResponse response = HttpRequest
    .create(new URI("http://www.google.com"))
    .body(noBody())
    .GET().send();
int responseCode = response.responseCode();
String responseBody = response.body(asString());

System.out.println(responseBody);
```


Current Status

- An initial cut of the API is in place
- Some Problems
 - No way to explode modules (currently .jimage files)
 - HTTP/2 support is limited

How Can We Help?

- Try out the API
- Run Hackdays
- Don't be Afraid
 - Core developers want our feedback & perspectives
 - They are concerned about getting swamped
 - Let Adopt* help - we can be the first place that devs contact
- HTTP / 2 is a great place to make an impact
- Please join us...

JShell

- A Java REPL
- JEP 222
- Great for introducing people to Java & the platform
 - Devvxx 4 Kids
 - Java for Kids

Netbeans & JDK 9

- Netbeans betas should support JDK 9 beta soon
- Can we make some new plugins?
 - HTTP/2 Sender plugin
 - JShell plugin
 - Learn from JS REPLs
 - Nashorn
 - Java EE 8 support
 - Better integration with JS & HTML 5

THANK YOU

- Commercials
 - www.jclarity.com
 - @jclarity
 - jClarity Censum
 - jClarity Illuminate
- ben@jclarity.com



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