Why Alibaba?

Alibaba Position Statement JCP Elections 2018

Over the years, Java has proliferated in Alibaba. Many applications are written in Java. 10,000 Java developers have written more than a billion lines of Java code. Alibaba has customized most of its Java software based on the rich open-source ecosystem. These Java programs are developed for online trading, payments and logistics operations. In fact, Alibaba almost uses the full spectrum of Java technologies, including middleware (Apache Tomcat, Jetty, Netty, etc), big data (Spark, HBase, Drill, Flink), modularity (OSGi), in memory database (ElasticSearch) and security.

Alibaba's investment in OpenJDK dated back to 2010. To cater for the specific needs to run large-scale eCommerce applications, we identified the requirements and optimized these features in our customized version derived from OpenJDK. Our customized OpenJDK version is tailored for runtime performance, predictable and consistent garbage collection, production-time profiling for critical online Java applications. We will continue to innovate Java infrastructure technology based on OpenJDK. Alibaba is now user of the OpenJDK Community TCK, which will help us on compatibility for our contributions back to OpenJDK community.

As one of the largest companies using Java in China, we hope we can contribute more to OpenJDK and JCP by being an EC member.

Alibaba and Open Source

We have a strong record of open source and community involvement. Alibaba actively participates on corporate level in a broad range of Java open source projects:

- *Apache Dubbo*: High-performance, java based, open source RPC framework
- Apache RocketMQ (Apache Top Level Project): Distributed messaging and streaming platform with low latency, high performance and reliability
- OpenMessaging: A cloud native, vendor-neutral open specification for distributed messaging
- *JStorm*: Enterprise Stream Process Engine

- *FastJson*: A fast JSON parser/generator for Java

Some of them are already donated to Apache Foundation. We have two OpenJDK committers and another one in expert group in JSR 353. We hope to share our experiences, thoughts, ideas to the EC discussion to help balance the point of views, we hope to bring in a fresh input on super scale Java and we hope to be deeply involved in OpenJDK community as JCP EC by contributing our JDK enhancements as patches, JEP to OpenJDK, by supporting JSRs, by involving in Adopt-a-JSR activities and by directly participating in current OpenJDK project, we commit to contribute our enhancements to OpenJDK community. JWarmup technology is a good example, which is used in Alibaba' read workloads to precompile Java hot methods and eliminate JVM warmup cost at application startup, now has been made as JEP. Alibaba will continue this work and push JWarmup into future JDK release. We believe our experiences on OpenJDK development will definitely bring values to community. As one of the world's largest users of Java, we use Java from underlying JVM runtime, middleware, up to different aspects of JEE, we have expertise throughout the Java Platform, and this gives us great insights into the technical merits of each JSR.

Alibaba's JCP Representatives

Kingsum Chow is the chief scientist of system software hardware co-optimization. He has over 15 years of optimizing Java performance in collaboration with Appeal, IBM, BEA, Sun and Oracle JVM teams while working at Intel. In 2016, he joined Alibaba to improve Java performance in the data center. Kingsum has been issued more than 20 patents. He also has delivered more than 90 papers and presentations. Kingsum appeared four times in JavaOne keynotes and almost a dozen times in JavaOne and Oracle OpenWorld presentations covering the topic of software performance systems and optimization. Kingsum received a PhD in Computer Science and Engineering from the University of Washington in Seattle in 1996.

Sanhong Li is the chief JVM architect at Alibaba. He has been working on Java since 2004, where he began at Intel Asia-Pacific R&D Lab implementing JSR135. He joined IBM in 2008 to improve runtime security on OSGi platform. He progressed to working on the development of IBM's Java Virtual Machine in 2010, where he led a project to develop multi-tenancy technology for the JVM. In 2014, he joined in Alibaba to lead the development for Alibaba JDK, a customized OpenJDK version. Sanhong Li has presented at local and international conferences such as JVM language summit, JavaOne and QCon. He co-leads Shanghai Java User Group and co-chairs APMCon. He has authored over 10 technical papers and a number of technical patents.