The Challenges of using new open source stack

DiDi Chuxing

About DiDi

~300 million
Passengers

~15 million
Registered drivers

16 million
Rides completed per day

1.43 billion
Rides completed in 2015

SERVICES

Didi Chuxing offers a diverse range of transportation services through one mobile app:

| Taxi Hailing | Private Car | Enterprise Solution | Hitch | Bus | Chauffeur | Test Drive | Car Rental |

DiDi ♥ Open source

- Open Source Software Used：

  - Tengine、Mysql、Redis、RocketMQ、Thrift

  - Kafka、HBase、Hadoop、Spark

  - GoLang、PHP、Gitlab

  - Docker、Kubernetes、Tensorflow

Why Not Java?

- Java is the most popular development technology stack: More mature and stable

  - More excellent developer

  - More frameworks and libraries: Excellent experience can be used

- The premise of the framework: Distributed computation

  - Every APP faces challenge of CAP:What should we do?

  - Global framework and design of multiple availability zones are necessary.

- Everything is new.

  - It means that there will be a lot of Bug.

- Lack heavyweight framework and library: Everything is still in the process of creation

  - The lack of library means we need to make it on our own.

  - The emergence of excellent framework means they may need to be reconstructed.

- Personnel training is a long process.

  - Very few universities will offer New Technology as part of their curriculum.

  - The niche technology makes people worried about career prospects.

- The uncertainty of community evolution.

  - R&D investment from mature foundation and operation institution is essential.

  - Attitude of acceptance from the mainstream Internet companies is important.

- Multi-zone framework is easier to design: Global 7x24 Service

- More stable than expected

- Simplify the distributed computation: Lower threshold of Large-Scale Computation

- With the development of cloud computing, Golang community become more mature, which reduces our worries.

  - Engineers can experience the early-stage development of the community.

- More systems will be transferred to the new technology stack.

  - Not only GoLang, but also more new open source stack.

THANK YOU