



The Challenges of using new open source stack

DiDi Chuxing



~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

- 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

Our challenges

- 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.

Key Challenge

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

Key Challenge

- 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.

Key Challenge

- 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.

Key Challenge

- 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