





Presented By : 冯嘉(Von Gosling)

# Apache RocketMQ 5.0, embracing the Distributed Messaging Standard OpenMessaging

# Safe Harbor Statement

**The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Alibaba's products remains at the sole discretion of Alibaba.**



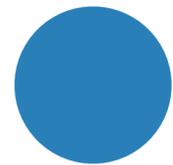
# Presentation Agenda



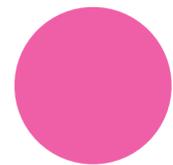
**A Brief History of Apache RocketMQ**



**Apache RocketMQ Community**



**Cloud Native OpenMessaging Standard**



**Apache RocketMQ 5.0**

# About Me



- 🌿 **Apache RocketMQ Co-Creator, PMC member, Committer, Evangelist**
- 🌿 **Linux OpenMessaging Initiator, TSC member, Committer, Evangelist**
- 🌿 **Alibaba Senior Architect, Principal Architect @Aliware MQ , Alibaba RocketMQ Team Leader**
- 🌿 **Open-source Enthusiast, active speaker and writer, have rich experience in distributed system, system performance and web architecture**
- 🌿 **Email: [vongosling@apache.org](mailto:vongosling@apache.org)**



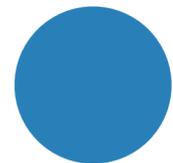
# Presentation Agenda



**A Brief History of Apache RocketMQ**



**Apache RocketMQ Community**



**Cloud Native OpenMessaging Standard**

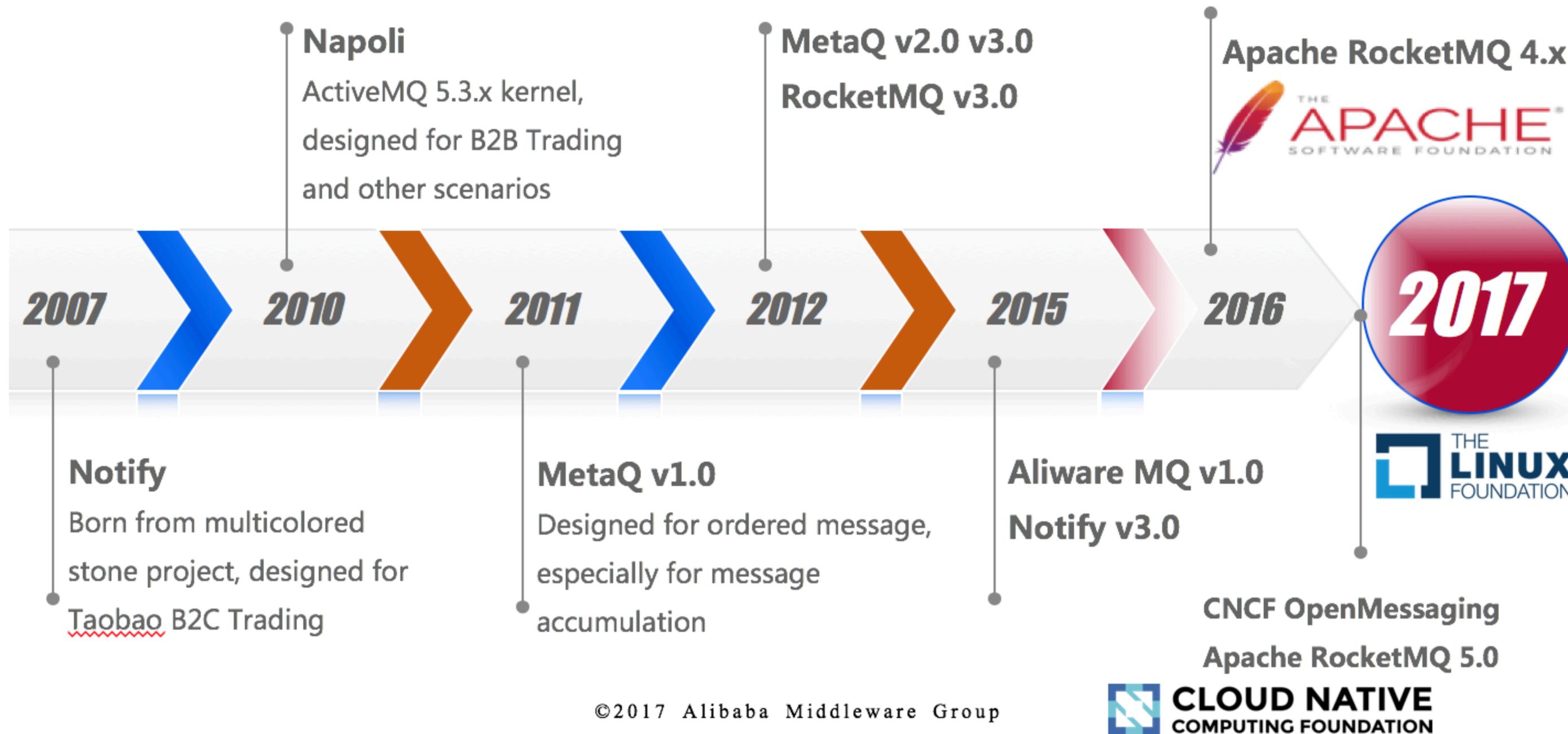


**Apache RocketMQ 5.0**

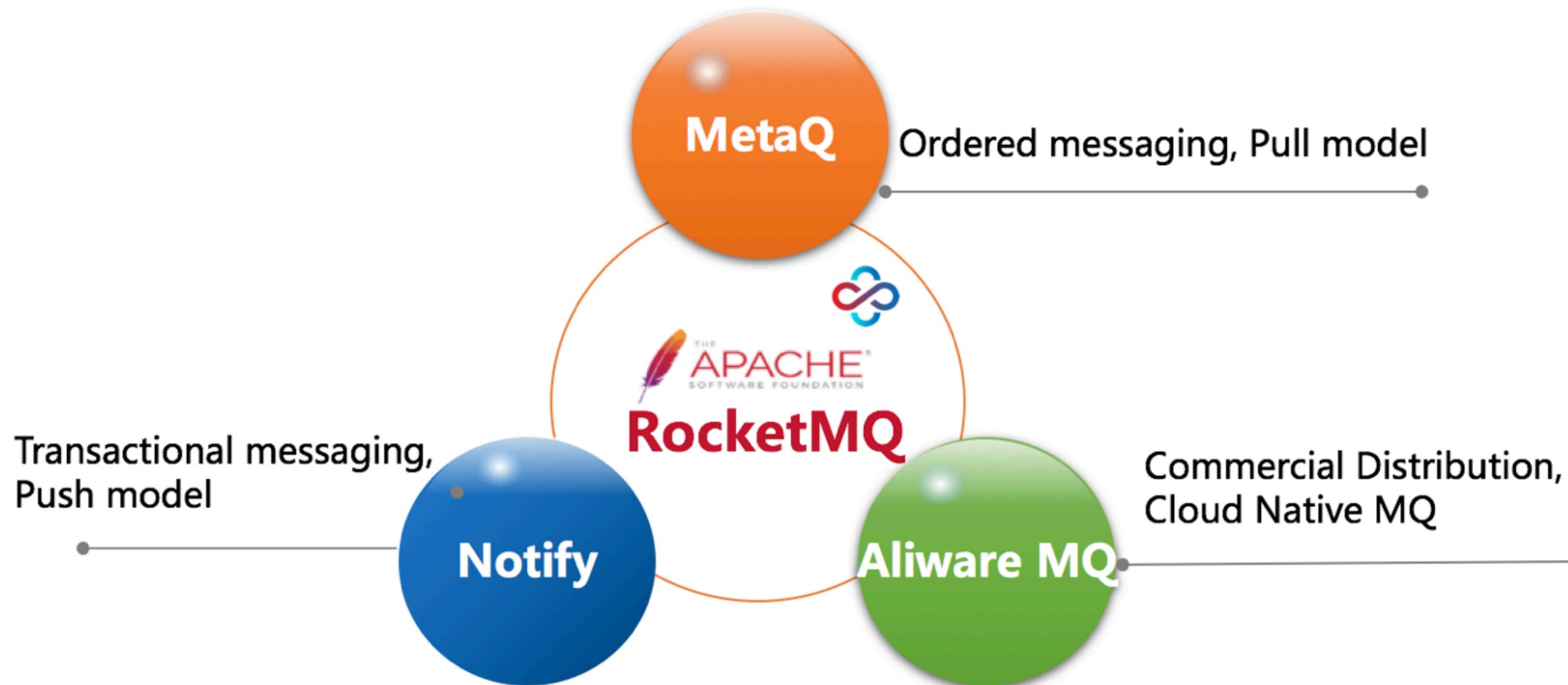
# A Brief History of Apache RocketMQ



# A Brief History of Apache RocketMQ

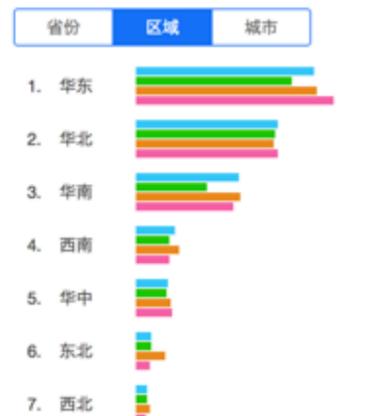


# A Brief History of Apache RocketMQ



# A Brief History of Apache RocketMQ

rocketmq kafka activemq rabbitmq



# A Brief History of Apache RocketMQ





# Presentation Agenda

- A Brief History of Apache RocketMQ
- **Apache RocketMQ Community**
- Cloud Native OpenMessaging Standard
- Apache RocketMQ 5.0

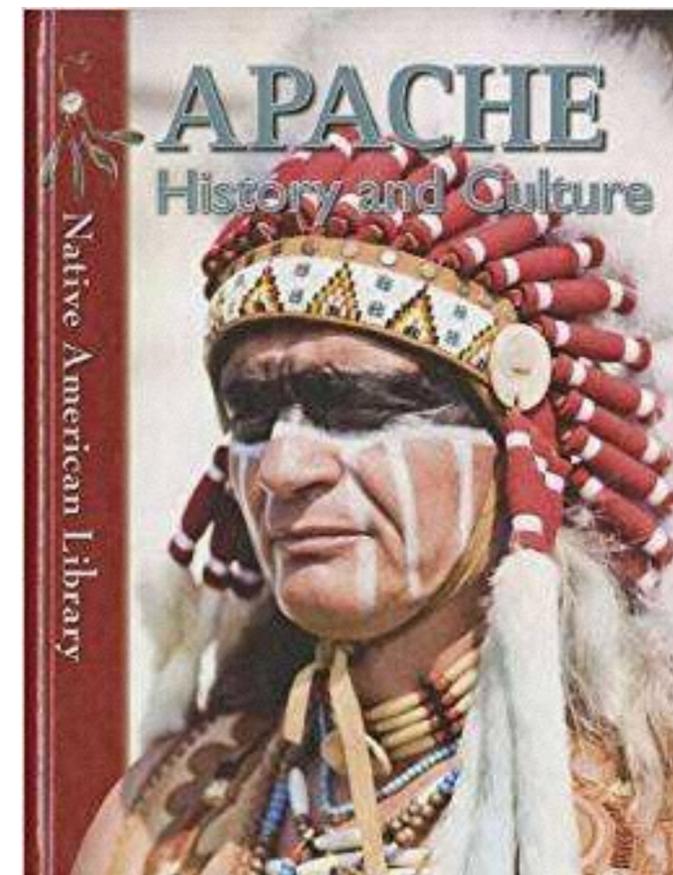
# Apache RocketMQ Community



## What is Apache



Apache, a patchy Web server



Apache, well-known for their superior skills in warfare strategy and their inexhaustible endurance

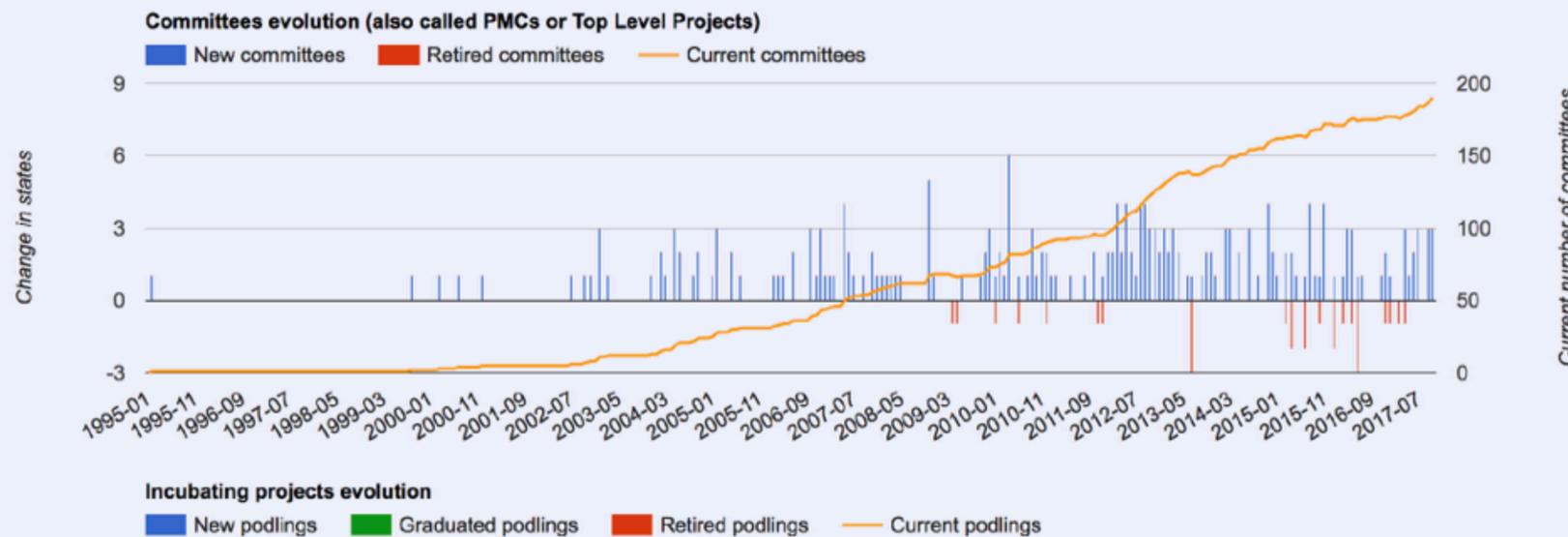
# Apache RocketMQ Community

## What is Apache

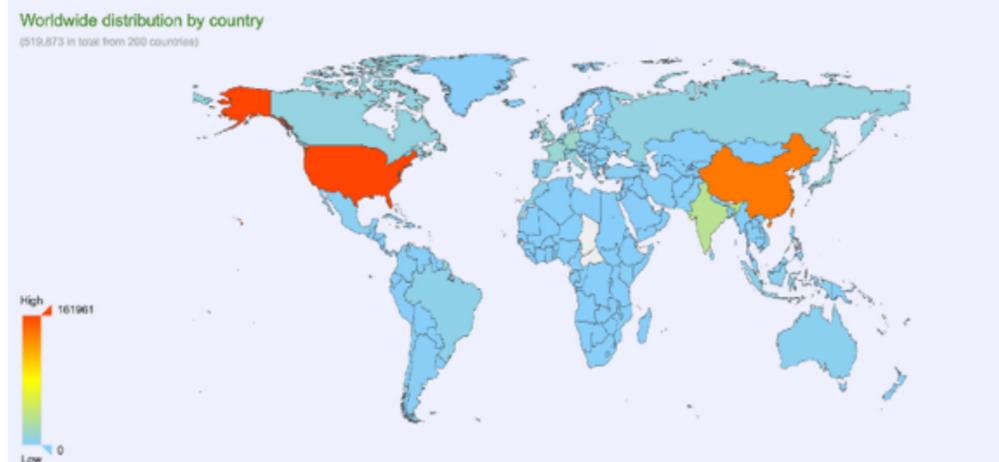
There are currently **350+** open source initiatives at the ASF:

- 190 committees managing 315 projects
- 5 special committees\*
- 53 incubating podlings

\*Infrastructure, Travel Assistance, Security Team, Legal Affairs and Brand Management



Worldwide download mirror activity, past 30 days

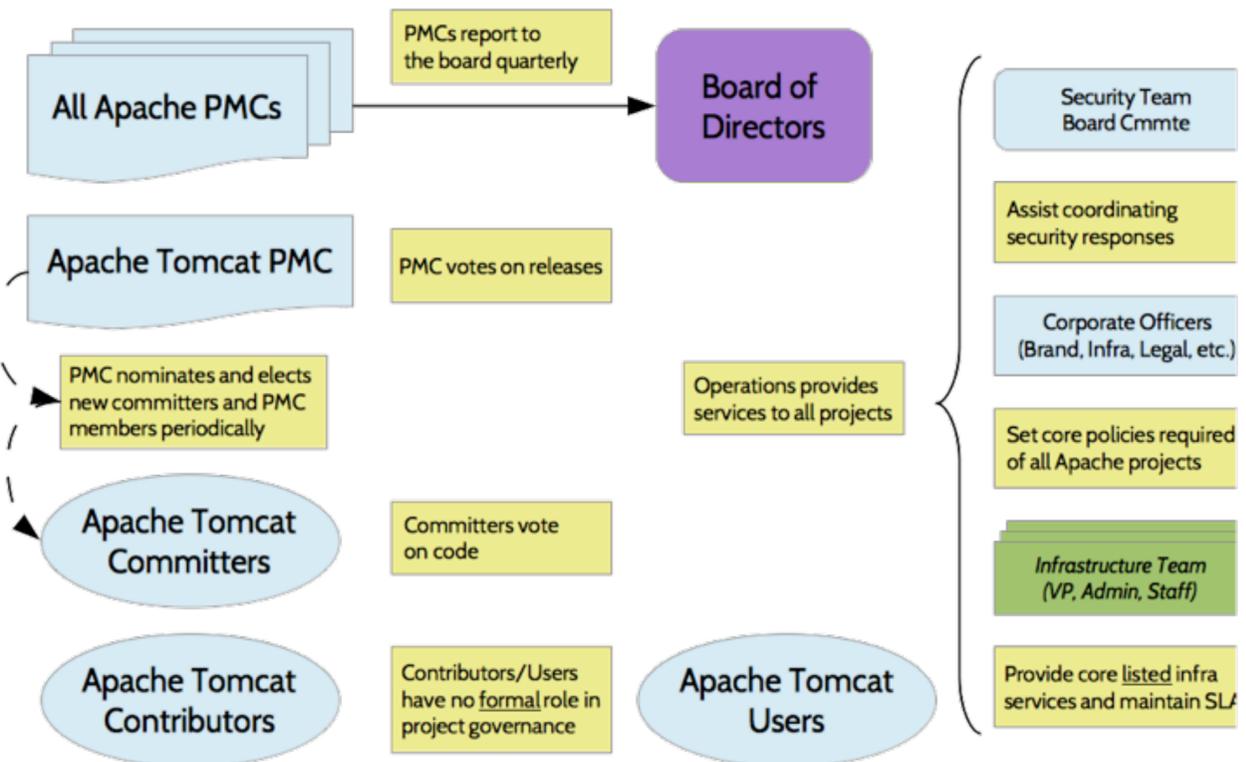


### Apache Project Governance

Every Apache PMC manages their project independently, applying the Apache Way, and following the few core required policies that various officers set for all projects

Apache Members do not have direct roles in projects, but have right of inspection of all private records

Apache Membership

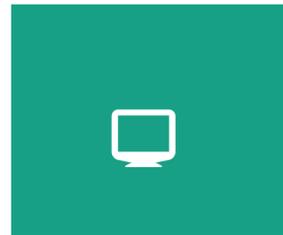


# Apache RocketMQ Community

*The Apache Way is a set of behaviors and practices developed at the ASF and designed to promote long-lived successful projects by focusing on stable governance and encouraging new contributors.*

*These behaviors are required of Apache projects.*

## What is Apache Way



### Community - Over Code

Community includes developers, writers, testers, sysadmins, devops,... and **users**.

Value group contributors, not lone wolves.

Diverse communities attract more new contributors over time.

BDFL not allowed in Apache PMCs

You are an individual - not an employee

Not talking about hierarchy

PMC owns the brand



### Merit - Recognizing Your Work

You gain merit by doing things that specific community values.

The more you do, the more power you may be granted to take actions.

Merit does not buy you authority (community must still agree).

Merit gets you privileges: commit access, voting on committers.



### Open Development - For Everything

Asynchronous communication is critical - feedback, critique, new ideas, others to show their work.

Must be public list unless there's a reason for private list.

Don't be a jerk; avoid the poisonous people.

The core development activity must be in English.



### Decision Making - Consensus & Votes

Consensus within community.

Voting is a shortcut to move consensus forward in a timely manner.

Voting is a way to record an official consensus.

Minimum time to make a decision: 72 hours.

# Apache RocketMQ Community

## Mailing lists

[Back to top](#)

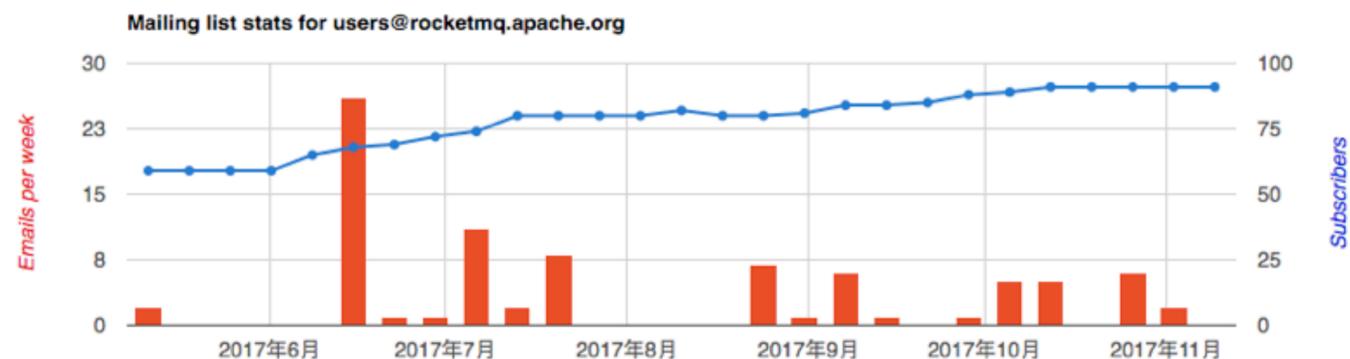


vsair commented 16 days ago • edited

Member +

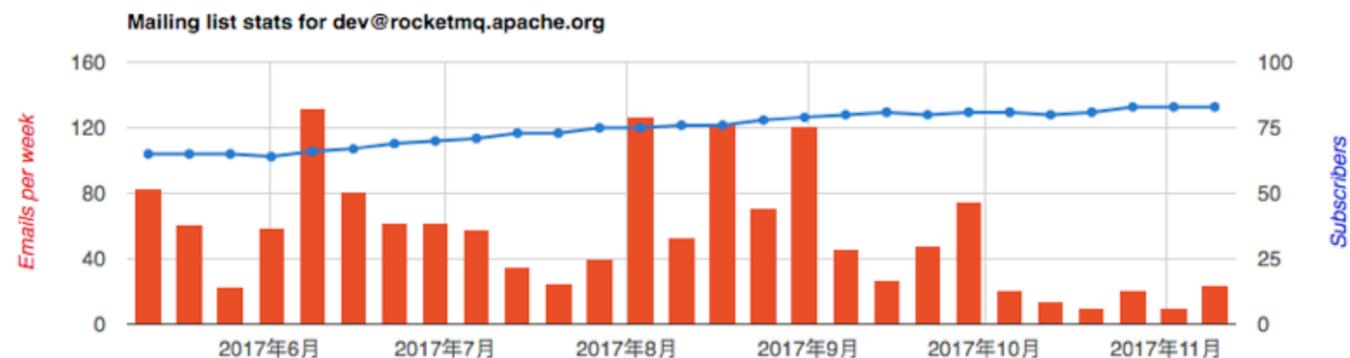
- **users@rocketmq.apache.org:**

Currently: 91 subscribers (up 11 in the last 3 months) (34 emails sent in the past 3 months, 51 in the previous cycle)



- **dev@rocketmq.apache.org:**

Currently: 83 subscribers (up 8 in the last 3 months) (663 emails sent in the past 3 months, 848 in the previous cycle)



Wake up commitLogService will make messages consumed quicker when put message, but it may increase disk usage. So, add a switch to decide where to open this feature, described in <https://issues.apache.org/jira/browse/ROCKETMQ-286>.

### Brief change log

Add a config property to MessageStoreConfig

### Verifying this change

Just a switch, verifying is to change it's value.

Follow this checklist to help us incorporate your contribution quickly and easily:

- ✓ Make sure there is a [JIRA issue](#) filed for the change (usually before you start working on it). Trivial changes like typos do not require a JIRA issue. Your pull request should address just this issue, without pulling in other changes - one PR resolves one issue.
- ✓ Format the pull request title like `[ROCKETMQ-XXX] Fix UnknownException when host config not exist`. Each commit in the pull request should have a meaningful subject line and body.
- ✓ Write a pull request description that is detailed enough to understand what the pull request does, how, and why.
- ✓ Write necessary unit-test to verify your logic correction, more mock a little better when cross module dependency exists. If the new feature or significant change is committed, please remember to add integration-test in `test module`.
- ✓ Run `mvn -B clean apache-rat:check findbugs:findbugs checkstyle:checkstyle` to make sure basic checks pass. Run `mvn clean install -DskipITs` to make sure unit-test pass. Run `mvn clean test-compile failsafe:integration-test` to make sure integration-test pass.
- ✓ If this contribution is large, please file an [Apache Individual Contributor License Agreement](#).

# Apache RocketMQ Community



## ROCKETMQ CODE JAM

### SIGNIFICANCE

1. Active community
2. Improve the field of large data ecology

### OUTPUTS

1. 1~3 Milestone Releases Per Project

### REWARD

1. Potential Committers Candidates
2. Free participation in the Meetup

## TOURNAMENT DETAILS

### ROCKETMQ-BIG DATA

1. Integration of big data analysis framework
2. Rich unit testing and Integration testing
3. Complete user documentation
4. Apache Beam preferred

### ROCKETMQ-CLIENT SDK

1. Development of RocketMQ Client
2. Rich unit testing and Integration testing
3. Complete user documentation
4. Go preferred

### ROCKETMQ-DATA REPLICATION

1. Implement Data Replication from Database
2. Rich unit testing and Integration testing
3. Complete development documentation
4. MySQL preferred

**Apache RocketMQ Meetup Beijing**

**Time:** 13:30, July 1st, 2017

**Location:** 4th floor of Building 5, Software Institute, Chinese Science Academy, Beijing, China

Alibaba Group 阿里中间件 ISCAS XLAB

**Apache RocketMQ** @ApacheRocketMQ · 7月1日

Apache RocketMQ Meetup Beijing concluded with perfect ending, many thanks to every one in RocketMQ community. Looking forward to next meetup

翻译自英文

# Apache RocketMQ Community



**Apache RocketMQ** @ApacheRocketMQ · 7月14日

Welcome dongeforever to be PMC member, we strongly value documentation, integration with other project and other aspects. Next, hope you:-)

🌐 翻译自英文

**dongeforever**

昨天 13:24



回复: Invitation to become Apache RocketMQ PMC member: dongeforever

[详细信息](#)

收件人: yukon, 抄送: private@rocketmq.incubator.apache.org

Hi,  
Yeah. I accept.  
It's a honor to become a PMC member of Apache RocketMQ.

Best Regards  
dongeforever

[更多来自'yukon'的内容](#)

**yukon**

2017年7月11日 15:25



Invitation to become Apache RocketMQ PMC member: dongeforever

[详细信息](#)

收件人: dongeforever@apache.org, 抄送: private@rocketmq.incubator.apache.org

Dear dongeforever,

In recognition of your contributions to Apache RocketMQ, the RocketMQ PMC has voted to make you a PMC member.

See [1] for what these roles mean.

As you have already signed an ICLA and have an Apache account no paper work is required by you other than replying to this email to say if you accept or reject the invitation.

Before deciding, please read [2] which provides useful info for new PMC members and what their voting rights and expected responsibilities are.

Congratulations!

[1] <http://www.apache.org/foundation/how-it-works.html>

[2] <http://www.apache.org/dev/pmc.html>

# Apache RocketMQ Community

<a href="#">rocketmq-console</a>	update console's readme closes apache/incubator-rocketmq-externals#8	9 months ago
<a href="#">rocketmq-cpp</a>	polish	a month ago
<a href="#">rocketmq-docker</a>	[ROCKETMQ-183] Play Script to run broker and namesrv at local in dock...	8 months ago
<a href="#">rocketmq-flink</a>	Create directory for beam,flink,spark,storm,mysql,redis,mongodb	8 months ago
<a href="#">rocketmq-flume</a>	Remove the 'ng' suffix of sub projects.	9 months ago
<a href="#">rocketmq-go</a>	Go-Client remoting and RocketMqClient common method implement, closes a...	7 months ago
<a href="#">rocketmq-jms</a>	Migrate rocketmq-jms to here.	9 months ago
<a href="#">rocketmq-mysql</a>	Prepare release mysql replicator 1.1.0 version	4 months ago
<a href="#">rocketmq-php</a>	[ROCKETMQ-171] Initialized the PHP_SDK basic structure closes apache/...	8 months ago
<a href="#">rocketmq-redis</a>	1. Add more event to downstream to rocketmq .eg(PreFullSync and PostF...	a day ago
<a href="#">rocketmq-spark</a>	fixup endless data in MessageSet due to newly created iterator	a month ago
<a href="#">.gitignore</a>	[ROCKETMQ-81] Add the RocketMq plugin for the Apache Spark, thanks @h...	8 months ago
<a href="#">.travis.yml</a>	travis ci	a month ago
<a href="#">README.md</a>	Add two chapters rocketmq-cpp and contribute in README	a month ago

## Others

[RocketMQ-Druid](#), [RocketMQ-Ignite](#) and [RocketMQ-Storm](#) integration can be found in those repositories.

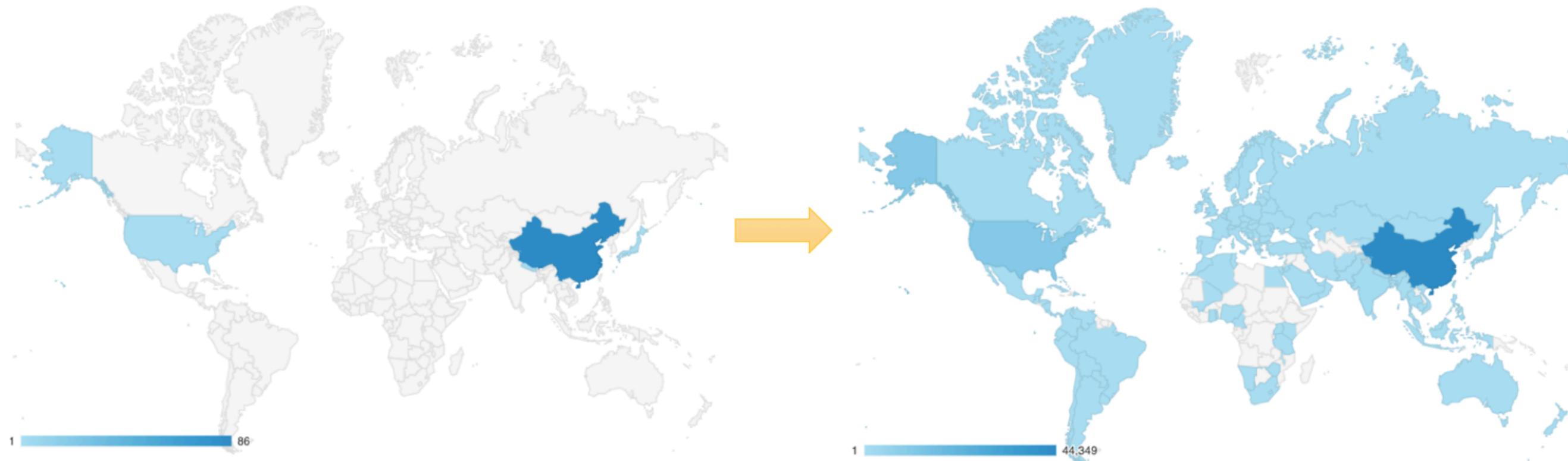
## Contribution

We are always very happy to have contributions, whether for trivial cleanups or big new features. We want to have high quality, well documented codes for each programming language, as well as the surrounding ecosystem of integration tools that people use with RocketMQ.

Nor is code the only way to contribute to the project. We strongly value documentation, integration with other project, and gladly accept improvements for these aspects.

More info please refer to [How To Contribute](#).

# Apache RocketMQ Community

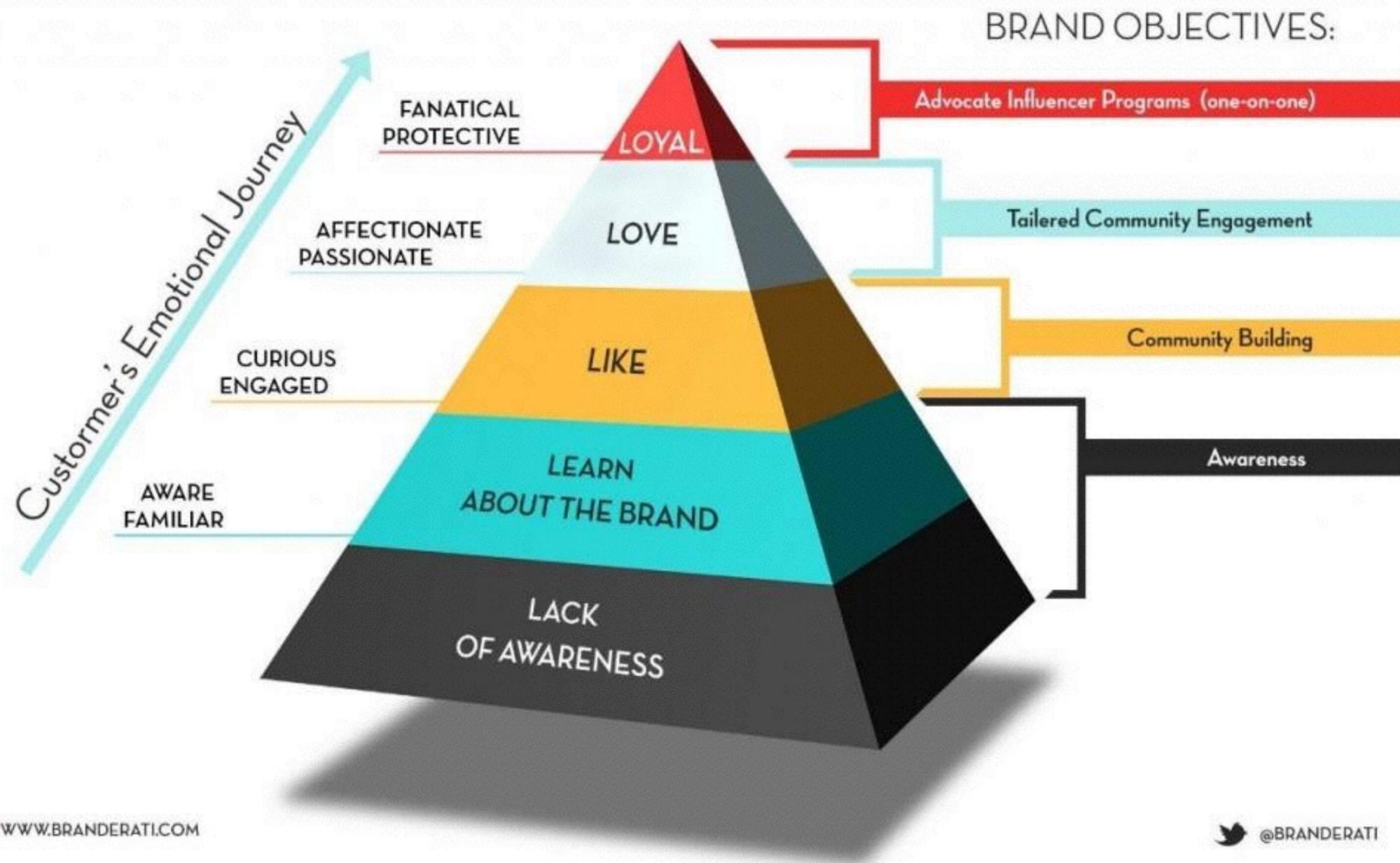


国家/地区	流量获取			行为			转化		
	会话数	新会话百分比	新用户	跳出率	每次会话浏览页数	平均会话时长	目标转化率	目标达成次数	目标价值
	70,830 占总数的百分比: 100.00% (70,830)	51.79% 平均浏览次数: 51.70% (0.18%)	36,682 占总数的百分比: 100.18% (36,617)	39.57% 平均浏览次数: 39.57% (0.00%)	3.67 平均浏览次数: 3.67 (0.00%)	00:04:32 平均浏览次数: 00:04:32 (0.00%)	0.00% 平均浏览次数: 0.00% (0.00%)	0 占总数的百分比: 0.00% (0)	US\$0.00 占总数的百分比: 0.00% (US\$0.00)
1. China	44,349 (62.61%)	46.82%	20,763 (56.60%)	35.22%	3.98	00:05:16	0.00%	0 (0.00%)	US\$0.00 (0.00%)
2. United States	10,015 (14.14%)	62.94%	6,303 (17.18%)	48.35%	3.07	00:03:06	0.00%	0 (0.00%)	US\$0.00 (0.00%)
3. Hong Kong	2,500 (3.53%)	39.48%	987 (2.69%)	34.52%	3.98	00:05:22	0.00%	0 (0.00%)	US\$0.00 (0.00%)
4. Japan	2,156 (3.04%)	43.32%	934 (2.55%)	36.55%	3.82	00:05:00	0.00%	0 (0.00%)	US\$0.00 (0.00%)

# Apache RocketMQ Community

## CUSTOMER-BRAND RELATIONSHIP MODEL

brought to you by: **BRANDERATI**  
FROM LIKE TO LOVE TO LOYALTY





# Presentation Agenda

 A Brief History of Apache RocketMQ

 Apache RocketMQ Community

 **Cloud Native OpenMessaging Standard**

 Apache RocketMQ 5.0

# Cloud Native OpenMessaging Standard



# Cloud Native OpenMessaging Standard



## Foundation Umbrella

### 规模 X 10

- ▶ Apache, Linux, Eclipse, GNU, Cloud Foundry, Mozilla 等基金会



78% 公司使用开源  
63% 公司参与开源



Pros

- ▶ 成本 — 更早/快的部署及实施
- ▶ 品牌 — 稳定的社区、口碑



Cons

- ▶ 成本 — 维护/升级难, 集成难
- ▶ 体验 — 需求/问题响应慢

### 回报 X 5

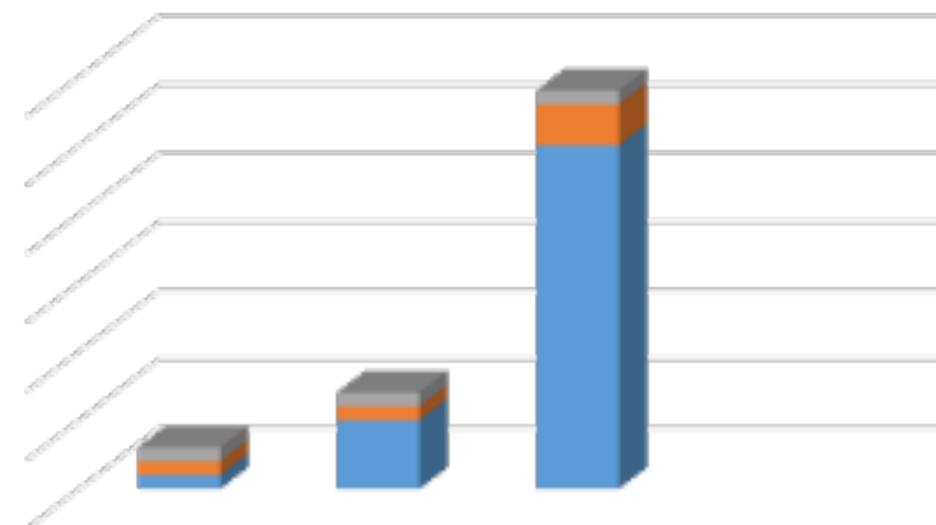
- ▶ 单一厂商, 如MySQL, OpenOffice, NetBean, JBoss

< 200 开发者, 日均代码提交 <100 次

- ▶ 基金会项目

> 1000 开发者, 日均代码提交 >100 次

## 市场潜力规模



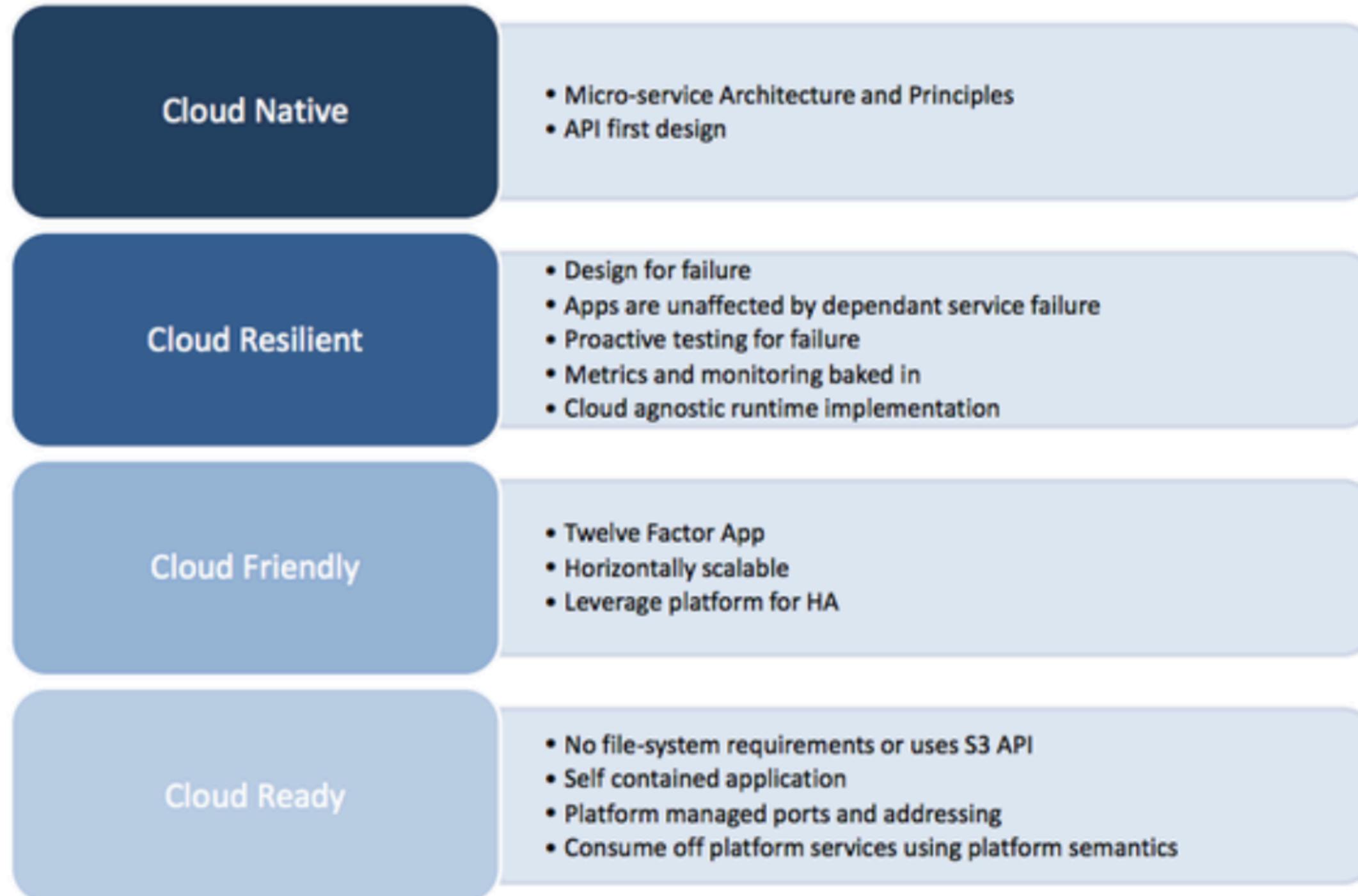
小型社区 中型社区 大型社区

■ 未满足的市场 ■ 客户 ■ 代码贡献者

# Cloud Native OpenMessaging Standard



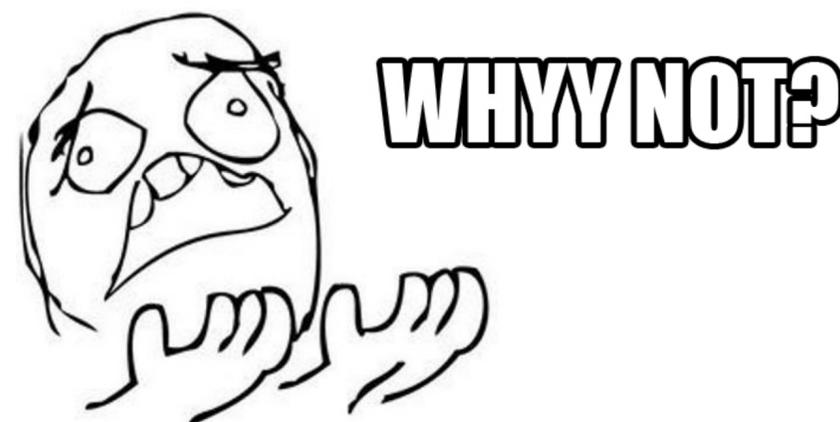
## Cloud Native Maturity Model



# Cloud Native OpenMessaging Standard



## Why OpenMessaging

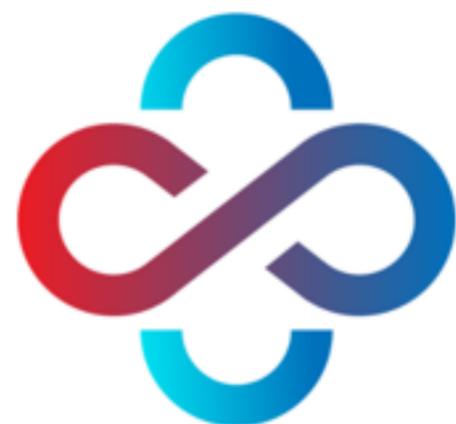


# Cloud Native OpenMessaging Standard



## Why OpenMessaging

<http://openmessaging.cloud/>



# OpenMessaging

build **passing** maven central **0.1.0-alpha** chat on gitter license Apache 2

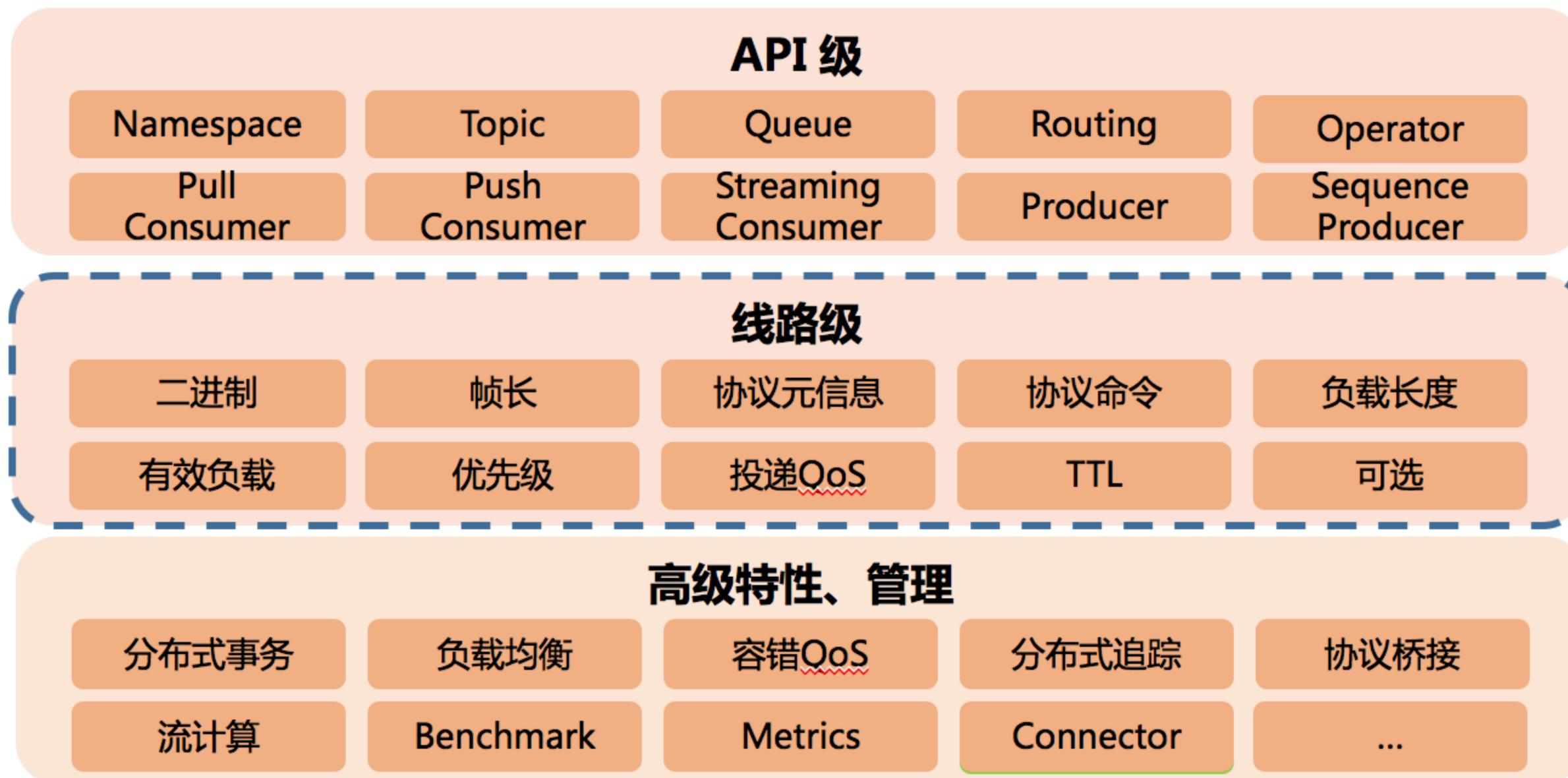
## A vendor-neutral open standard for distributed messaging and streaming

OpenMessaging, which includes the establishment of industry guidelines and messaging, streaming specifications to provide a common framework for finance, e-commerce, IoT and big-data area. The design principles are the cloud-oriented, simplicity, flexibility, and language independent in distributed heterogeneous environments. Conformance to these specifications will make it possible to develop a heterogeneous messaging applications across all major platforms and operating systems.

# Cloud Native OpenMessaging Standard



# Cloud Native OpenMessaging Standard



# Cloud Native OpenMessaging Standard



## Board Members



Alibaba

is a Chinese e-commerce company that provides C2C, B2C and B2B sales services, also cloud services.



Yahoo

is globally known for its Web portal, search engine Yahoo! Search, and related services.



Didi Chuxing

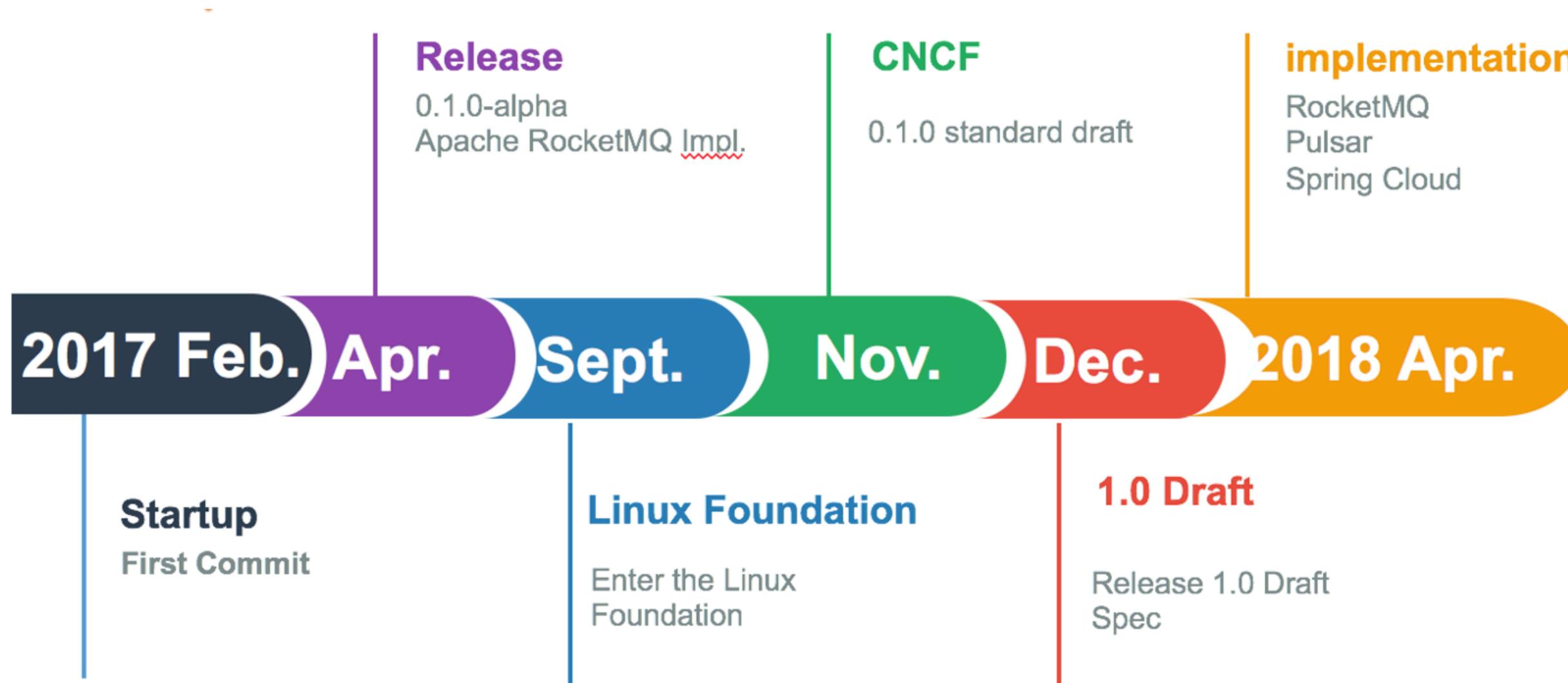
is a major ride-sharing company, providing transportation services for more than 400 million users across over 400 cities in China



Streamlio

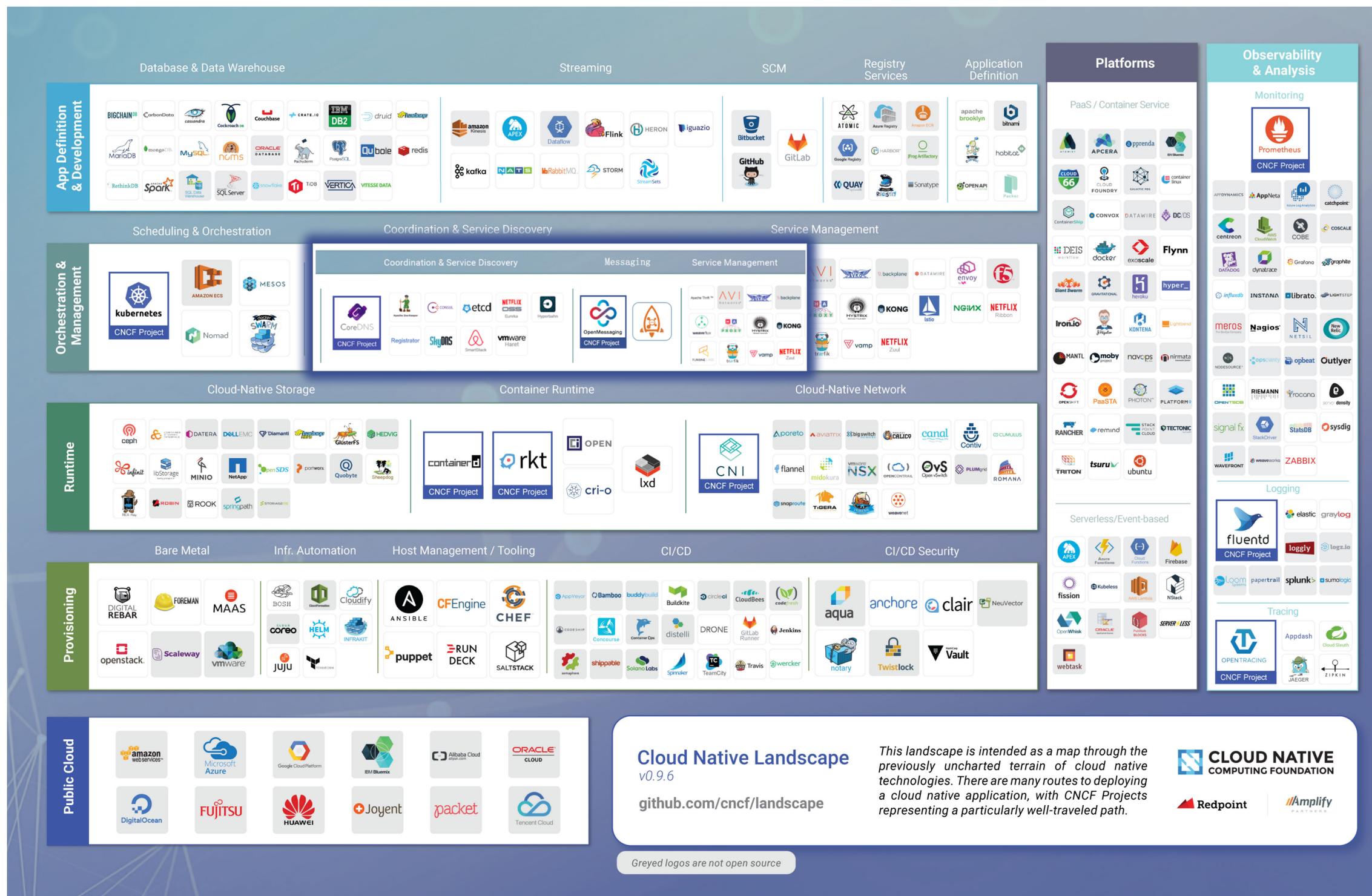
provide enterprise-grade, unified, end-to-end real-time solution

# Cloud Native OpenMessaging Standard



©2017 Alibaba Middleware Group

# Cloud Native OpenMessaging Standard





# Presentation Agenda

-  **A Brief History of Apache RocketMQ**
-  **Apache RocketMQ Community**
-  **Cloud Native OpenMessaging Standard**
-  **Apache RocketMQ 5.0**

# Apache RocketMQ 5.0

## 整体架构

- 新型计算平台的架构支撑
- 微服务架构
- 单进程多端口模式
- 全组件的Coroutine支持
- 全组件容错，参考<https://github.com/eclipse/microprofile-fault-toleranc>

## 存储

- 存储可插拔（关系型JDBC与NoSQL） & 内存管理
- 存储清理策略，未消费的数据如何安置
- 跨IDC消息复制
- 多副本可靠性（同城双机房、异地容灾）

## 运维

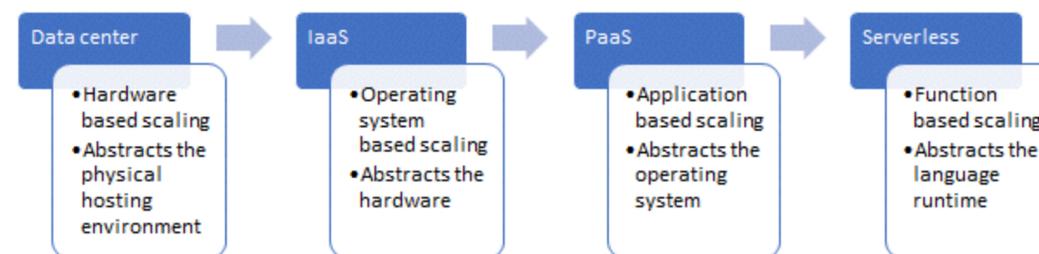
- K8s和Docker友好的
- 云平台、私有云低成本输出
- 健康检查、报表支撑、MBean over HTTP
- 模块化动态更新Dynamic Code Evolution- DCEV，配置动态更新
- 丰富的Interceptor- for metrics, tracing, security, AA, report
- 原子化的管理运维单位
- 守护组件Sentinal外置收敛

## Broker

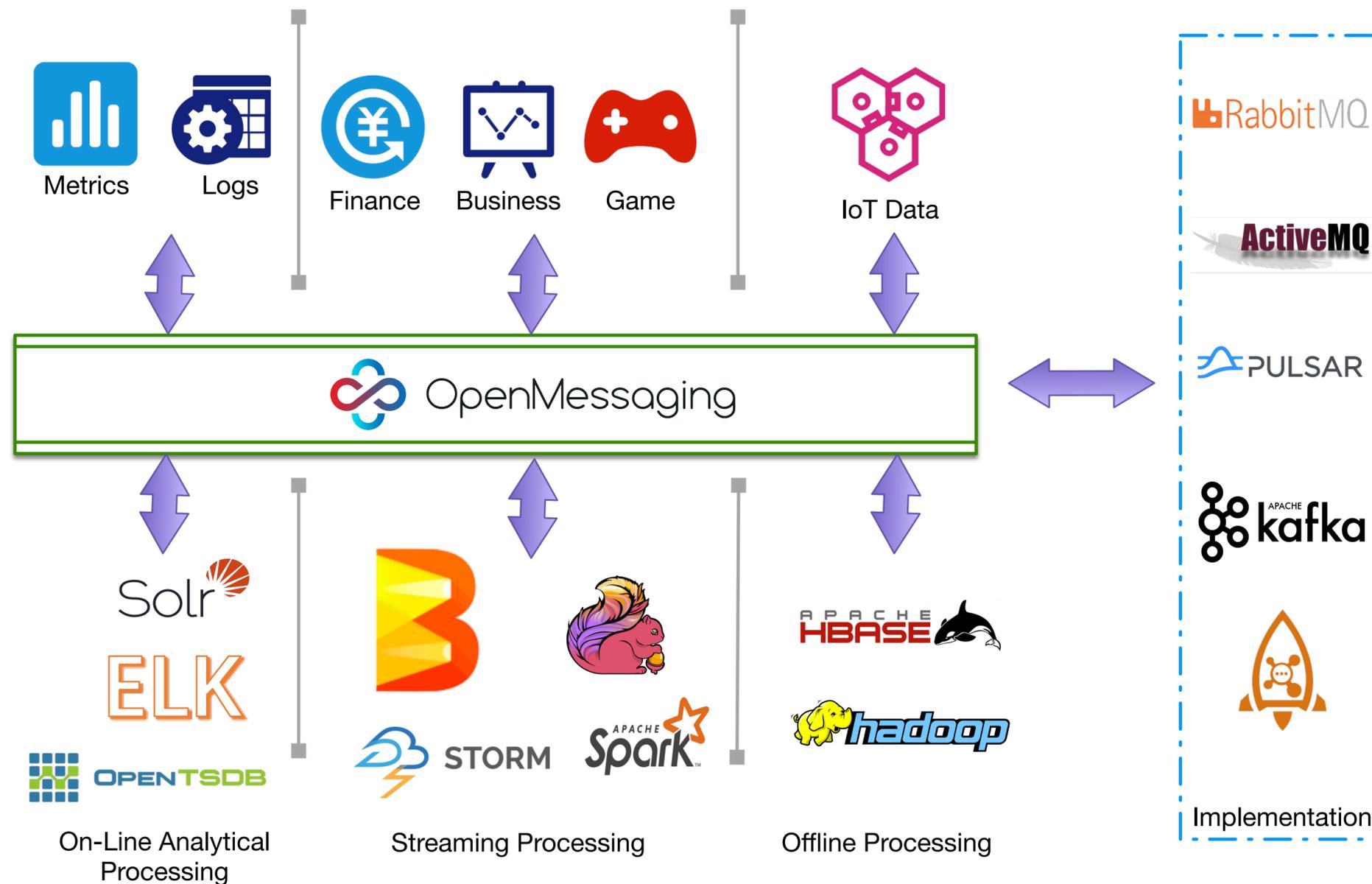
- 支持Pull和Push两种模式，Push为具有真正推送能力的模式，非长轮询模拟的方式。
- 多租户支持，避免Topic，CID命名冲突等情况，租户间提供资源隔离，限流降级策略
- 功能特性黑科技 – 消息去重、发送者事、百万TPS、全局顺序无热点、优先级队列
- 消息具有异步和单条ACK的能力。
- SPI & API – OpanAPI for Metrics, 资源的创建，删除与清理，运维操作等需要原子性，避免状态不一致的情况
- 提供Meta服务，避免数据不一致情况，比如4.x系列的订阅关系不一致
- 死信队列回查
- Rebalance自助触发

## SDK

- OpenMessaging标准实现
- 多语SDK（Java & C++）



# Apache RocketMQ 5.0



# Aliware MQ - Apache RocketMQ and Kafka Commercial Distribution

## 消息队列 (MQ)

消息队列 (Message Queue, 简称MQ) 是企业级互联网架构的核心产品, 服务于整个阿里巴巴集团已超过 10 年, 经过阿里巴巴交易核心链路反复打磨与历年双十一购物狂欢节的严苛考验, 是一个真正具备低延迟、高并发、高可用、高可靠, 可支撑万亿级数据洪峰的分布式消息中间件。

立即购买

立即开通

产品价格

帮助文档

产品专家咨询

微消息队列 Light MQ

消息队列 RocketMQ

跨域中继服务 CRS

消息队列 for Kafka



### 消息队列 RocketMQ

十年磨一剑, 阿里巴巴交易核心产品, 承载双十一万亿级消息洪峰  
[查看详情 >](#)



### 消息队列 for Kafka

全面融合 Kafka 开源生态, 无缝迁移, 更安全、更可靠、更易运维  
[查看详情 >](#)



### 微消息队列 Light MQ

连接端和云, 实现双向通信, 支撑亿级设备, 支持百万级消息并发  
[查看详情 >](#)



### 跨域中继服务 CRS

混合云解决方案, 跨网络, 跨平台、跨终端, 应用之间互联互通  
[查看详情 >](#)

# Aliware MQ Landscape

## 私有云、公有云

集成测试

依赖管理

一键部署

灰度部署

快速验证

专业文档

日常巡检

故障诊断

弹性扩容

工单答疑

## Aliware MQ

Dashboard

生态集成

路由中继

授权认证

健康度量

安全配额

高可用

智能计费

监控报警

专家培训

## OpenMessaging & Apache RocketMQ

普通消息

顺序消息

广播消息

Batch消息

定时消息

Clients

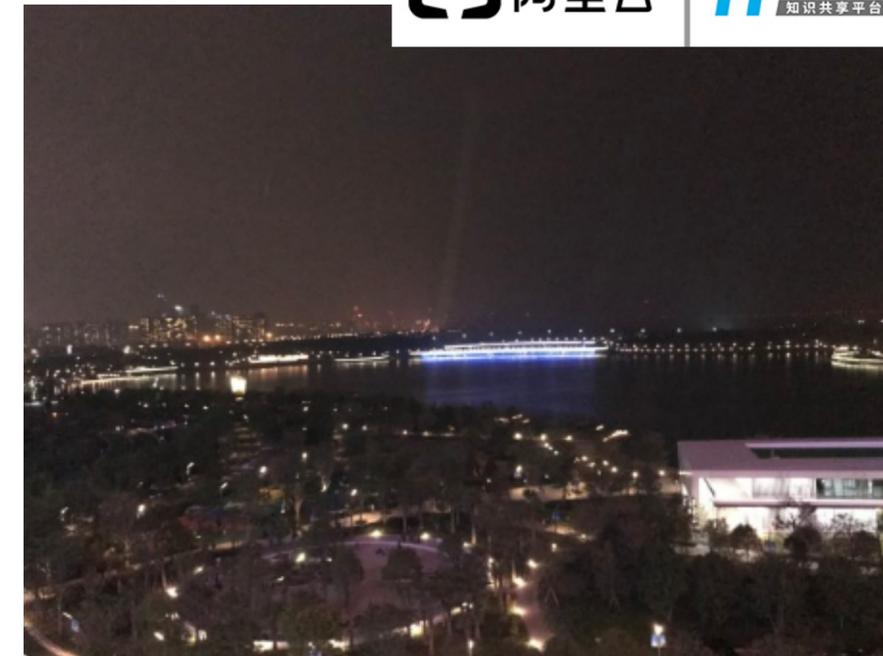
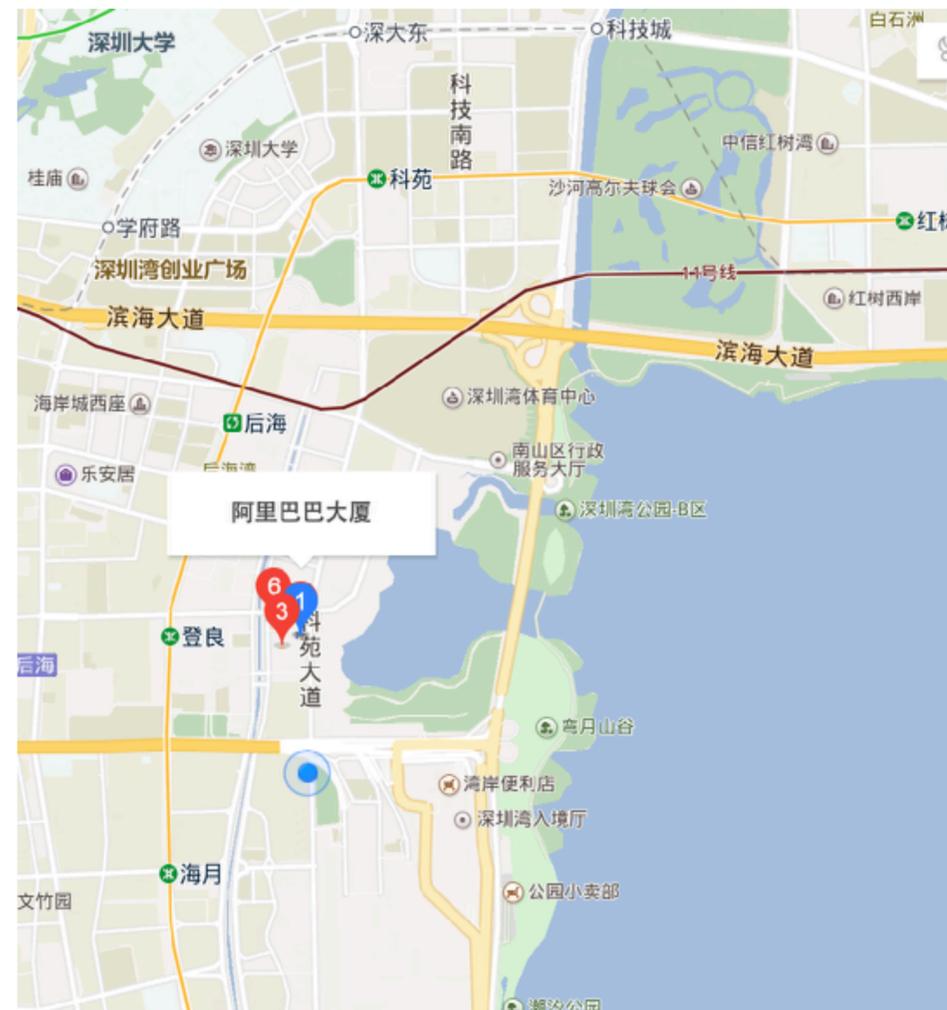
Connectors

Bridges

Docker

分布式事务





Alibaba Infra team is hiring

感谢大家  
THANKS!