



# From Apache Dubbo to Apache Dubbo Ecosystem

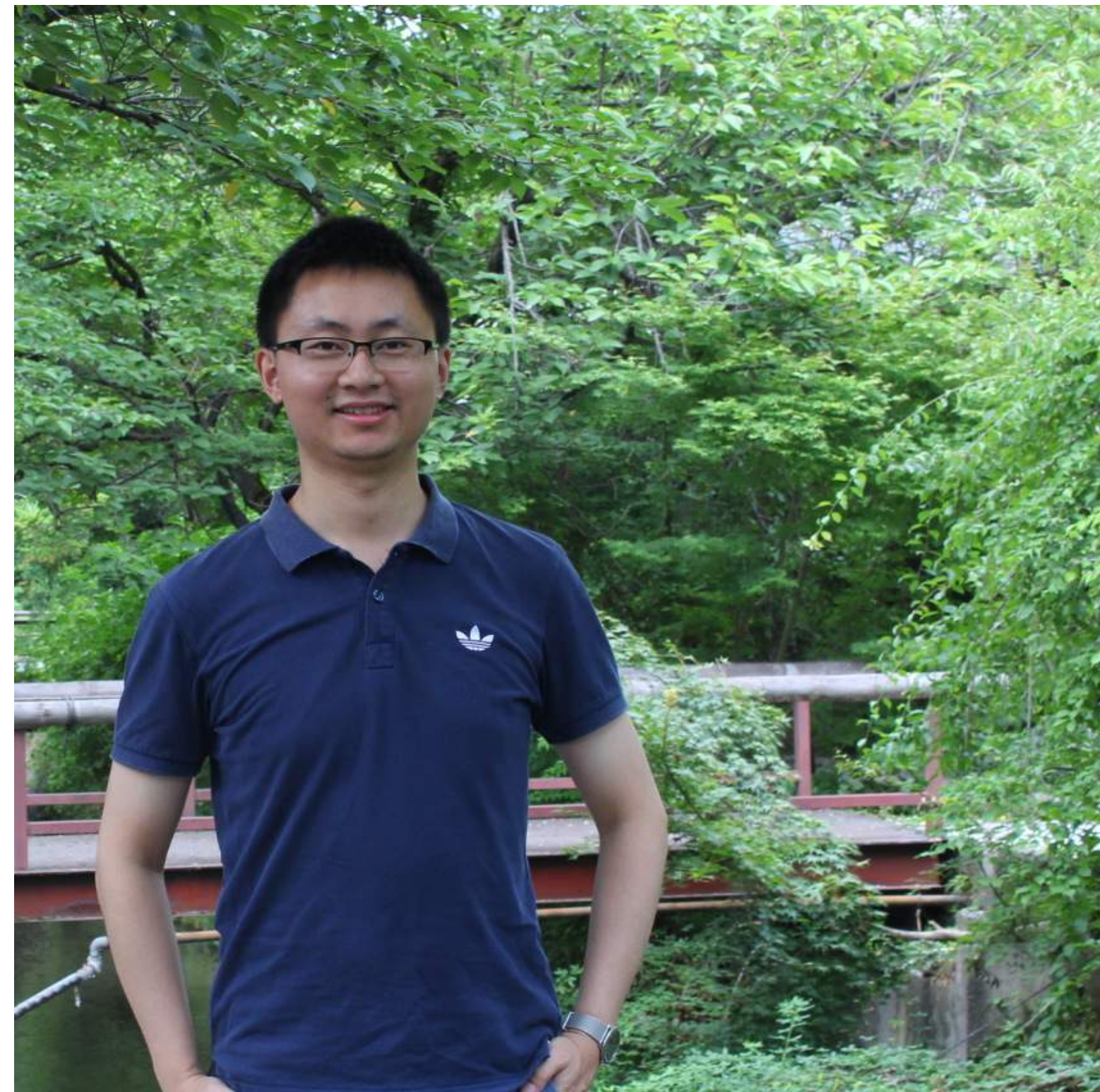
Huxing Zhang

2019.1.8

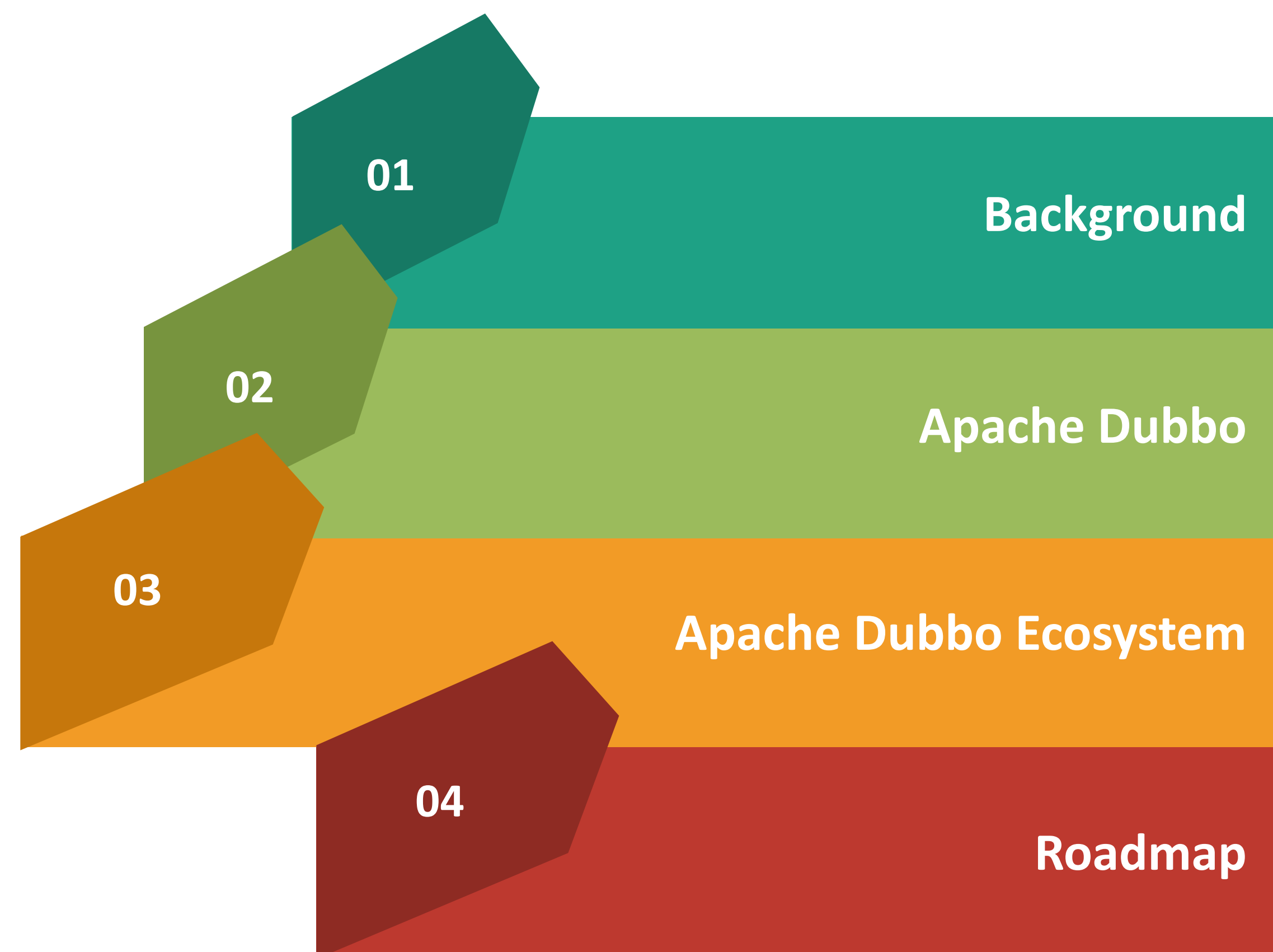


# Huxing Zhang(张乎兴)

- Senior Engineer @ Alibaba
- Apache Dubbo (incubating) PPMC Member
- Apache Tomcat PMC Member
- Arthas Core Developer
- GitHub: ralf0131
- Email: [huxing.zhang@gmail.com](mailto:huxing.zhang@gmail.com)



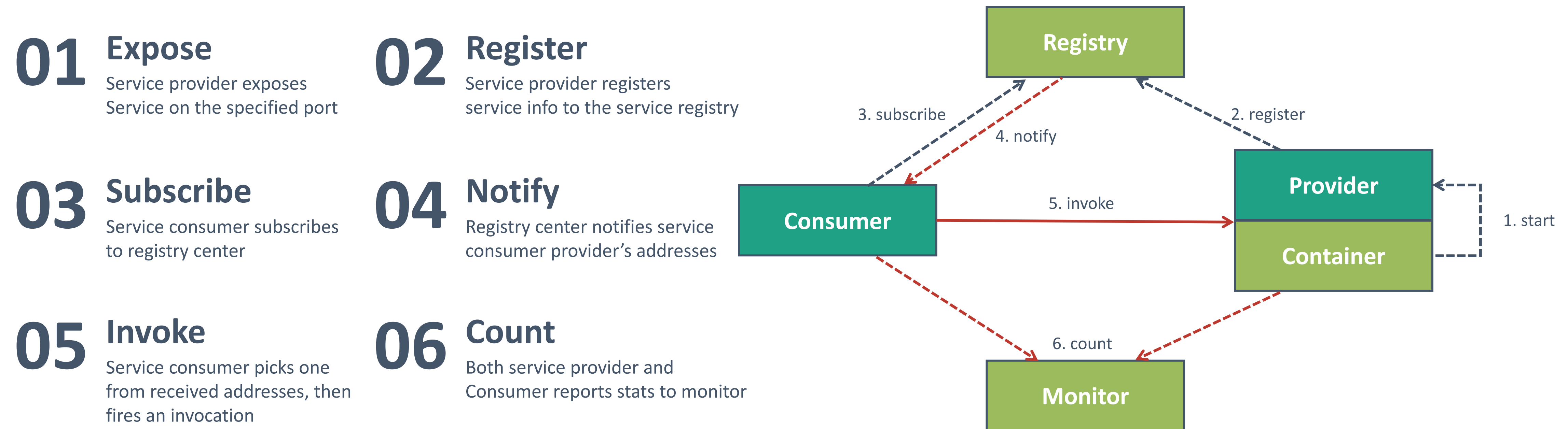
# Outline



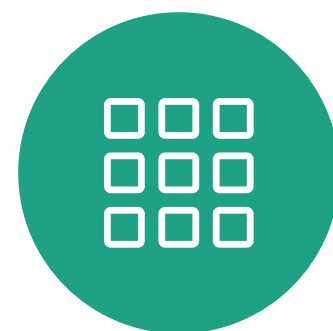


# Background

Apache Dubbo™ (incubating) is a high-performance, java based open source RPC framework.



# When talking about Microservices...



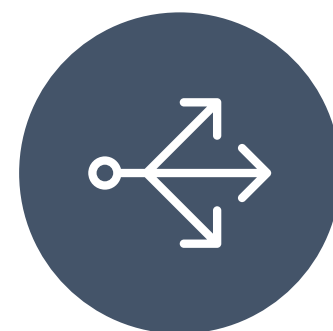
## Service Registry

Zookeeper/Eureka/Nacos



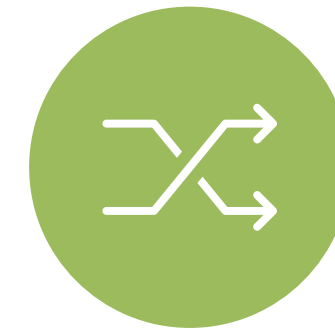
## Client-side load balance

Ribbon



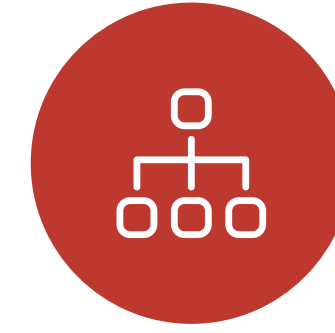
## Monitoring

Prometheus, Pinpoint



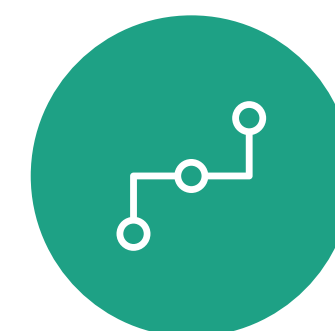
## Dynamic Configuration

Apollo/Nacos/Etcd



## Resiliency

Hystrix, Sentinel, Resilience4j



## Tracing

Zipkin, Skywalking


And more ...


# Current status: Dubbo as a RPC Framework


Developers only touches RPC API





# Fresh new Dubbo Admin

 Dubbo OPS



 简体中文

 服务查询

 服务治理

路由规则


标签规则 new


动态配置


访问控制

权重调整

负载均衡

 服务测试 feature

 服务Mock feature

 统计 feature

搜索Dubbo服务

\*

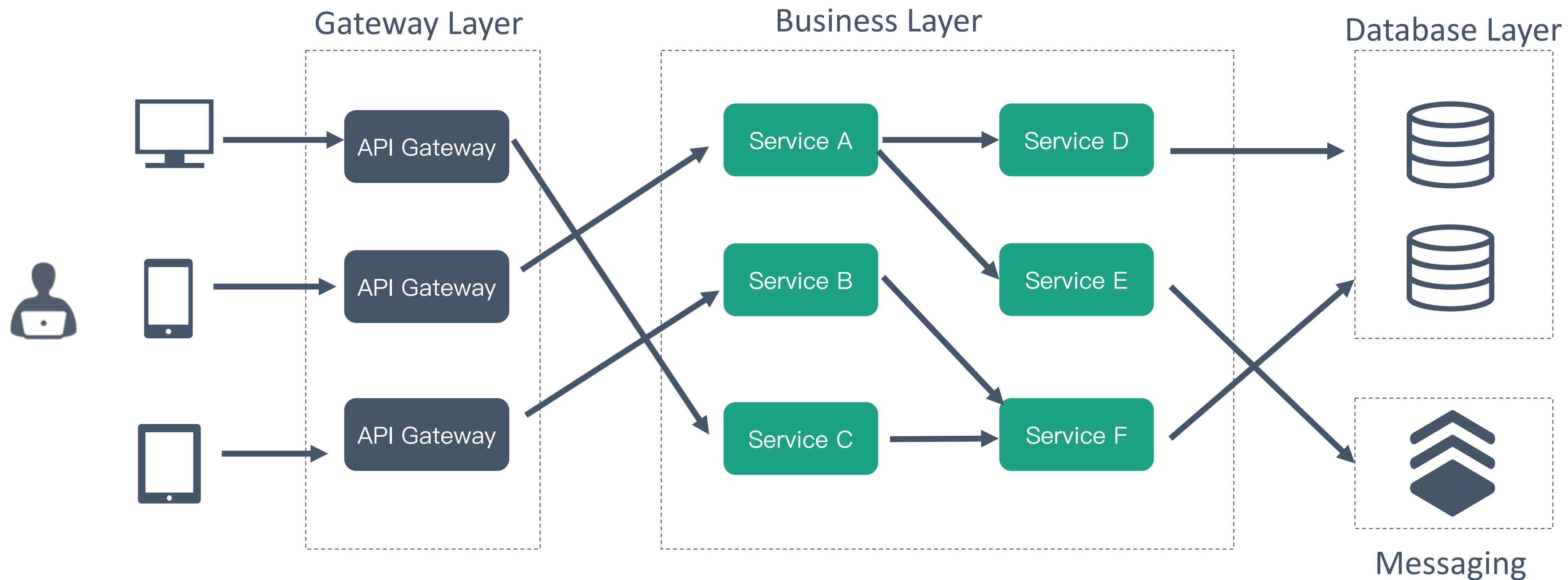
by 服务名

搜索

查询结果

服务名	组	版本	应用	操作
org.apache.dubbo.demo.api.DemoService			meetup-demo-provider	<div>DETAIL</div> <div>MORE ▾</div>
org.apache.dubbo.demo.api.NoResponse2Service			meetup-demo-provider	<div>DETAIL</div> <div>MORE ▾</div>
org.apache.dubbo.demo.api.NoResponseService			meetup-demo-provider	<div>DETAIL</div> <div>MORE ▾</div>
org.apache.dubbo.demo.api.TimeoutTestService			meetup-demo-provider	<div>DETAIL</div> <div>MORE ▾</div>
org.apache.dubbo.demo.api.UserService			meetup-demo-provider	<div>DETAIL</div> <div>MORE ▾</div>

# What user faces...



Tracing

Monitoring

Transaction

Testing

CI/CD





Developers  
touch multiple  
components

# Spring Cloud



## Spring Cloud Function

<https://github.com/markfisher/spring-cloud-function>

## Spring Cloud Pipelines

## Spring Cloud Gateway

<https://github.com/spring-cloud-incubator/spring-cloud-gateway>

## Spring Cloud Security

## Spring Cloud Config

## Spring Cloud Netflix

## Spring Cloud Stream

## Spring Cloud for AWS

## Spring Cloud Contract

## Spring Cloud Bus

## Spring Cloud for CloudFoundry

## Spring Cloud Sleuth

## Spring Cloud Data Flow

## Spring Cloud Connectors

## Spring Cloud Task



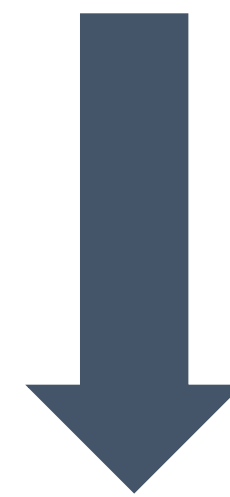
# Spring Boot



# Spring IO Platform

# Upgrade Apache Dubbo

Apache Dubbo™ (incubating) is a high-performance, **java based** open source **RPC framework**.



Dubbo is more than a RPC framework

Apache Dubbo™ (incubating) is a microservice framework which helps developers to quickly build high performance microservice applications.

Apache Dubbo 是一个微服务框架，帮助开发者快速构建高性能微服务应用。



# Apache Dubbo Ecosystem



## Definition

Apache Dubbo Ecosystem contains multiple projects around Apache Dubbo, which provides **production-ready best practices** to build microservices applications.

Apache Dubbo Ecosystem 是围绕 Apache Dubbo 打造的微服务生态，是**经过生产验证**的微服务的**最佳实践**的组合。



## Vision

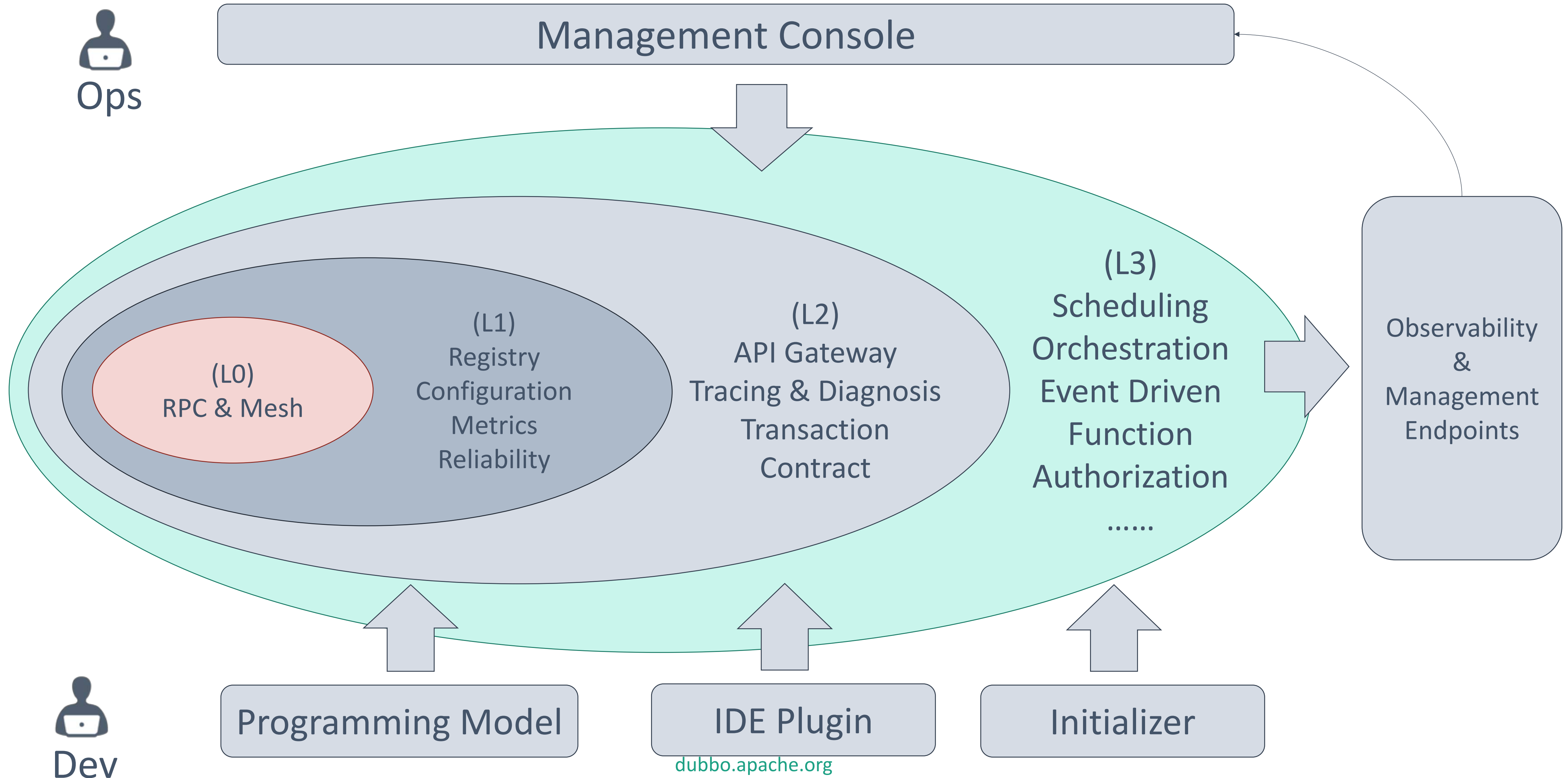
Apache Dubbo Ecosystem aims to help enterprise user to quickly transit to microservice architecture, and to build cloud native, cross language microservices to speed up the development cycle.

Apache Dubbo Ecosystem 致力于帮助企业用户快速完成微服务化转型，构建**云原生，跨语言**微服务应用，提高研发迭代效率。



# Dubbo Ecosystem components

12



# What should be included



## Well-known to developers

已经具备很好的开发者群体和影响力



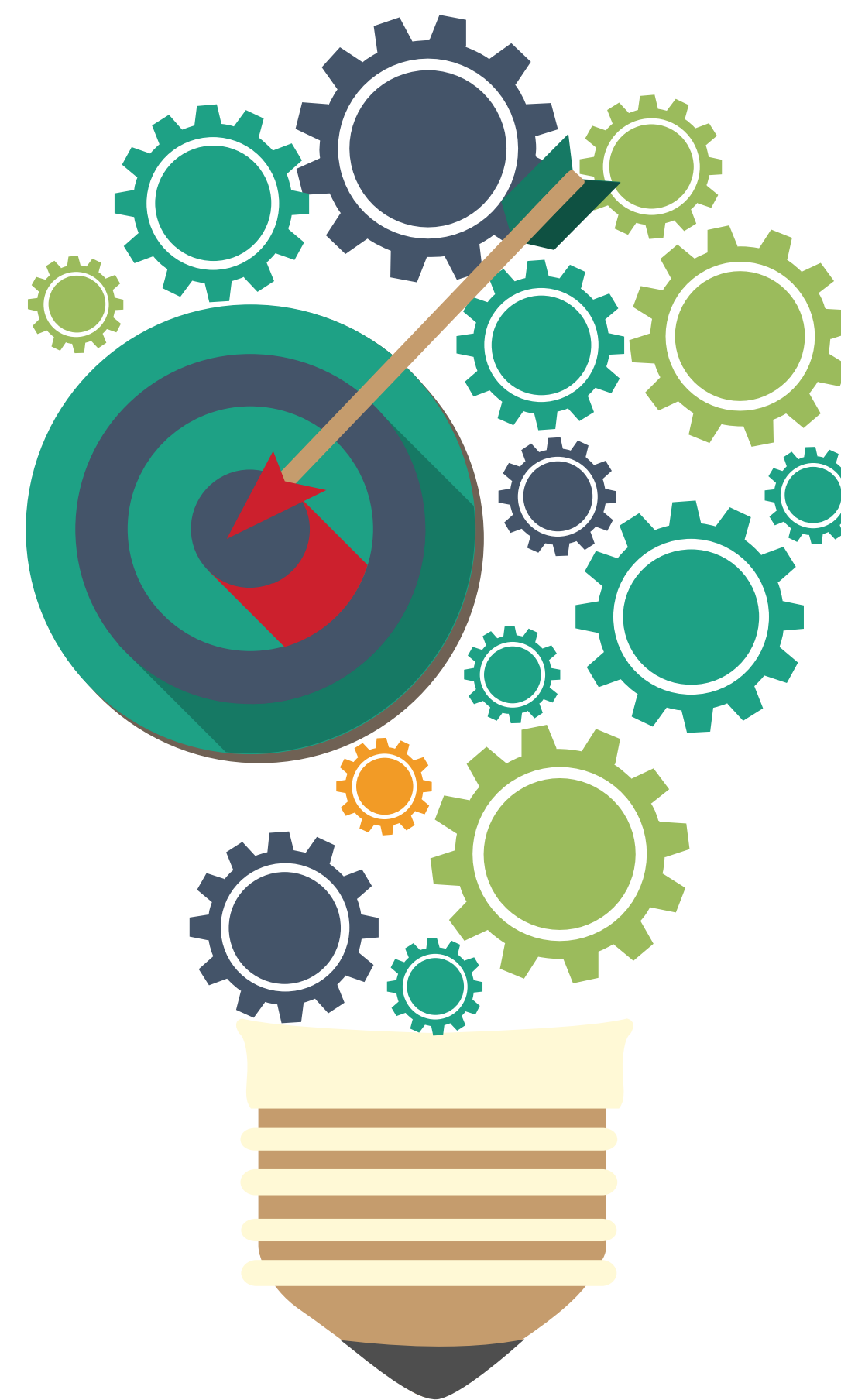
## Battle-tested on production system

经过生产系统的考验

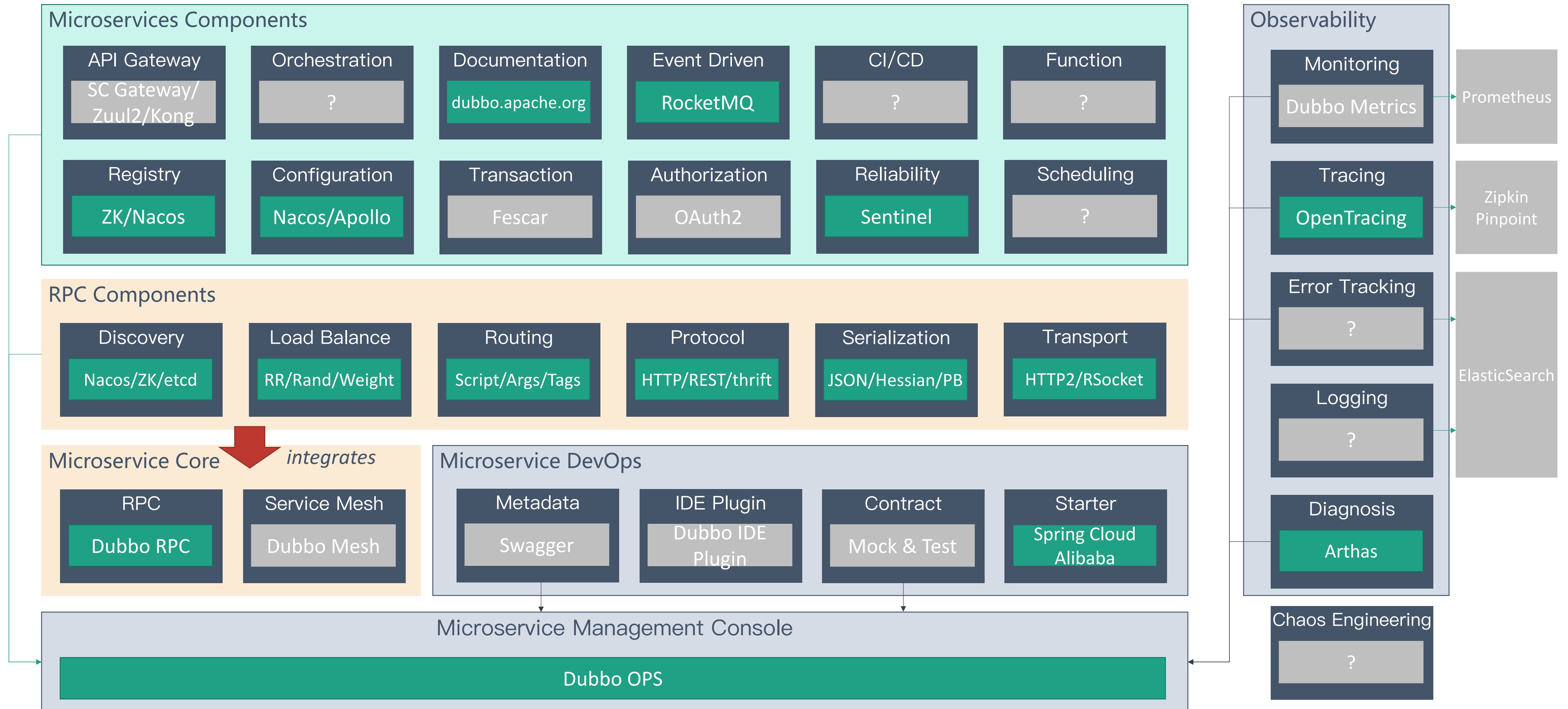


## Standard or de facto standard

在某一方面成为标准或者事实标准



# Apache Dubbo Ecosystem Overview







# Features

# Features



## Reliable

Battle-tested on production system



## Opinionated

No need to choose from 100 open source solutions, we pick it for you  
Well integrated for each components, but can also use separately



## Modern

Reactive Streaming  
Service Mesh  
Cloud native



## Polyglot

Multi-language SDK (nodejs, php, python, go...)

# Multi-language Support

Current status

	Node.js	PHP	Python	Go
Service Registry	Zookeeper	Zookeeper	Zookeeper	ZooKeeper
Protocol	Native Dubbo	Native Dubbo	HTTP	HTTP
Serialization	hessian	hessian	JSON	JSON
As Consumer	✓	✓	✓	✓
As Provider	✓	✓	x	x
Client side load balancing	Round Robin/Weighted/Consistent Hash	Random	✓	Random/Round Robin
Reliability	Circuit Breaker	Flow control	-	-

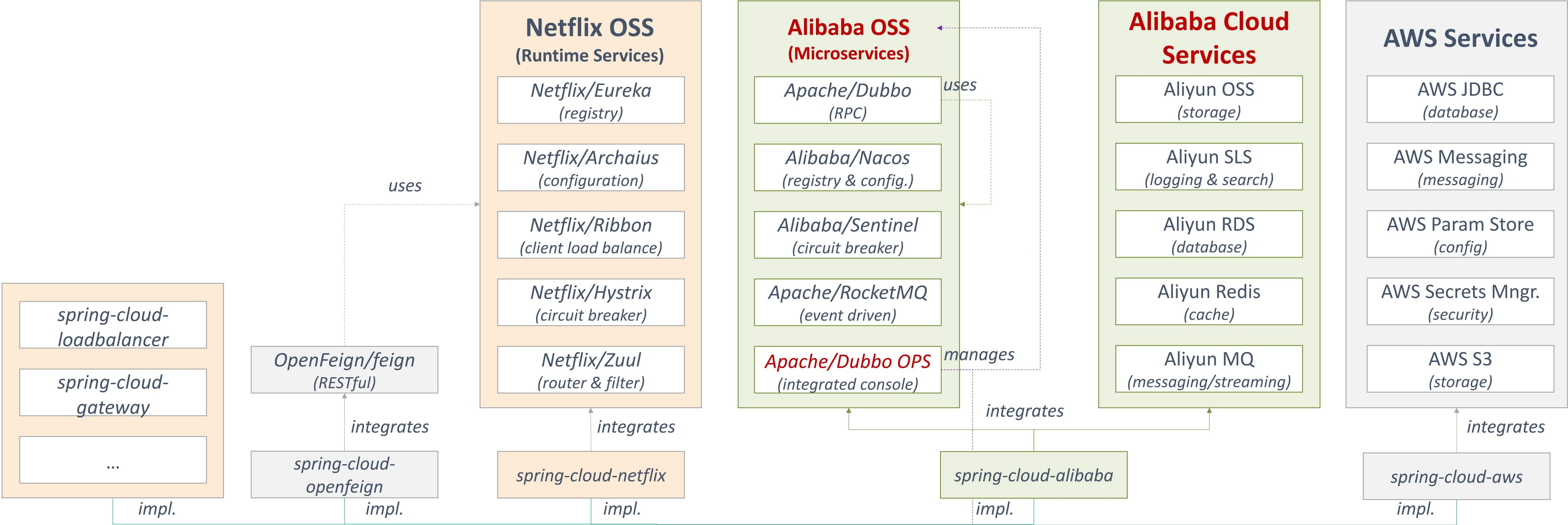
Community effort is needed!

[dubbo.apache.org](https://dubbo.apache.org)  
Copyright © 2018-2019 The Apache Software Foundation

<https://github.com/dubbo>

What is the relationship between Apache Dubbo and Spring Cloud?





**Micro-profile**

- config
- health
- fault-tolerance
- metrics
- open-tracing
- rest-client
- auth
- service-mesh
- .....

**Spring Cloud**

**Distributed Framework**

- Discovery
- Load Balance
- Tracing

**Routing**

- Config
- Circuit Breaker

**Security**

- Authentication
- Messaging Bus

**Stream Gateway Data Flow Function**

**Spring Boot**

- Endpoints
- Mngmnt & Metrics
- Data Access
- Reactive

**Spring Framework**

**IoC**

**CNCF**

- OpenMessaging
- OpenTracing
- .....
- .....
- CloudEvent
- OpenMetrics
- Containerd/OCI

# Apache Dubbo Ecosystem Roadmap



[dubbo.apache.org](https://dubbo.apache.org)

Copyright © 2018-2019 The Apache Software Foundation

# Summary



## Dubbo is more than a RPC framework

Upgrade to a microservice framework

定位升级到微服务框架



## Apache Dubbo Ecosystem

Build 4 layer Ecosystem around Apache Dubbo

是围绕 Apache Dubbo 打造的微服务生态，是经过生产验证的微服务的最佳实践组合

4层体系，L0-L1专注rpc核心，L2专注微服务核心，L3围绕微服务周边打造丰富生态



## Dubbo loves Spring Cloud

Dubbo Ecosystem components deeply integrate into Spring Cloud

Dubbo和Spring Cloud没有竞争关系，Apache Dubbo Ecosystem中的组件将深度集成到Spring Cloud体系当中

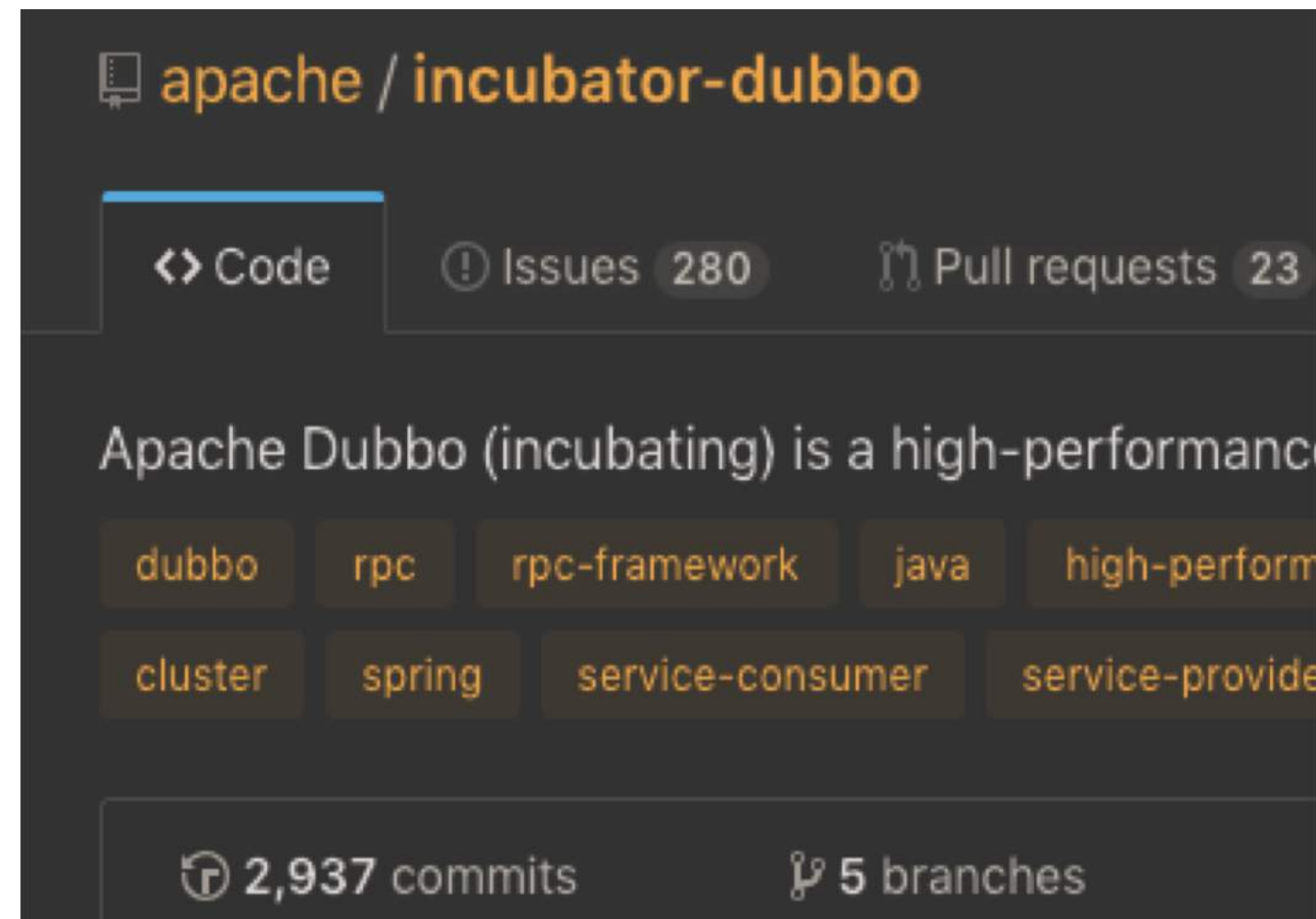


# How to contribute



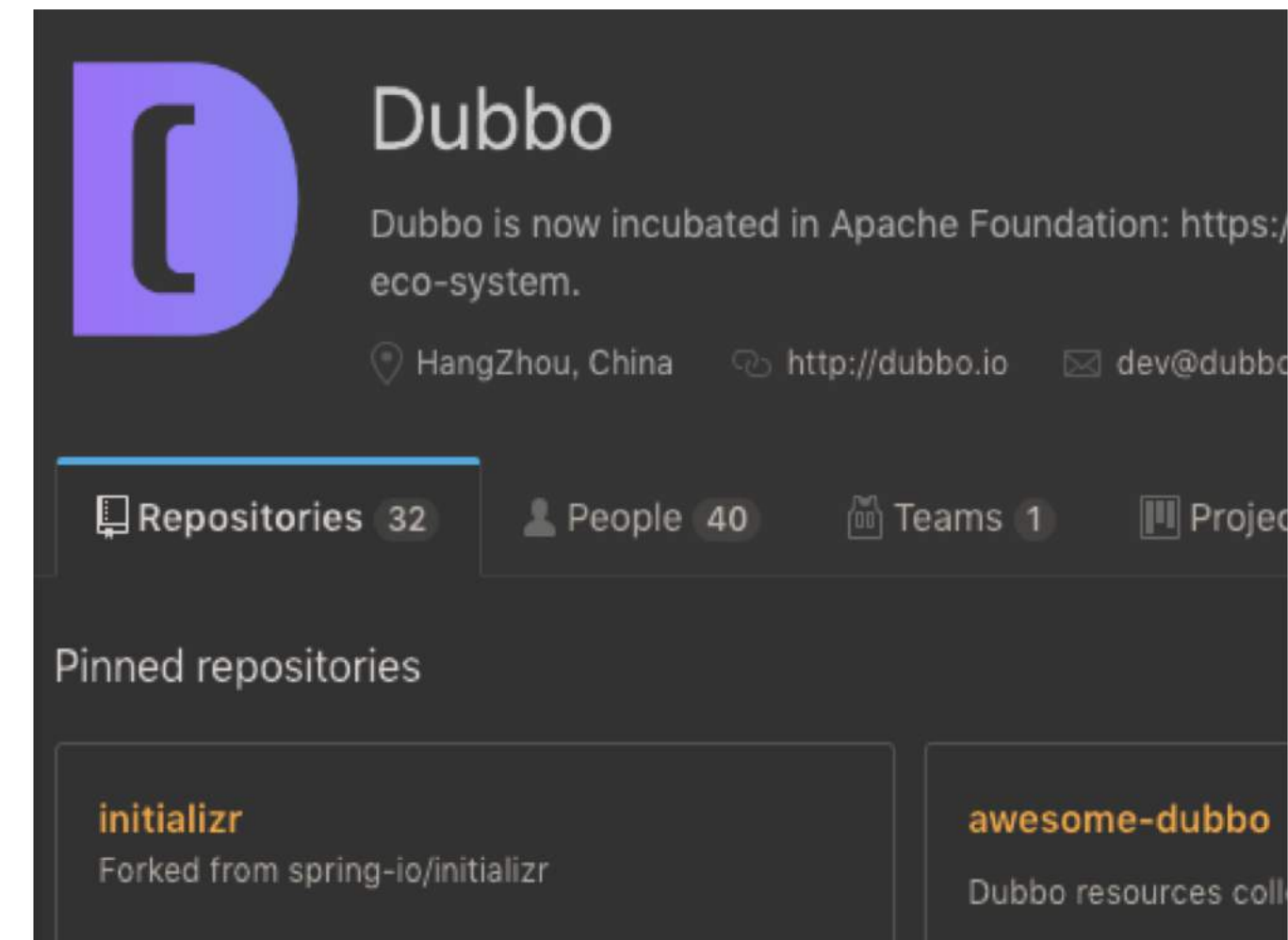
[dubbo.apache.org](https://dubbo.apache.org)

Documentation  
Blog  
Translation



[github.com/apache/incubator-dubbo](https://github.com/apache/incubator-dubbo)

File/Resolve issue (Triage/Labeling)  
Pull request  
Proposal/Discuss (dev@dubbo.apache.org )  
Release vote  
Samples



[github.com/dubbo](https://github.com/dubbo)

Multi-language SDK  
Integration with other Ecosystem components  
Developer Tools

[dubbo.apache.org](https://dubbo.apache.org)


Copyright © 2018-2019 The Apache Software Foundation

# CONTACT US

## Apache Dubbo开源讨论群

1157 Members



 Scan the QR Code to Join the Group



Home

[dubbo.apache.org](https://dubbo.apache.org)

[dubbo.io](https://dubbo.io)



GitHub

[github.com/apache/incubator-dubbo](https://github.com/apache/incubator-dubbo)

[github.com/dubbo](https://github.com/dubbo)



Mailing List

[dev@dubbo.apache.org](mailto:dev@dubbo.apache.org)



IM

[gitter.im/alibaba/dubbo](https://gitter.im/alibaba/dubbo)

钉钉群：21973601



# Join us: Apache Dubbo Guangzhou Meetup

23





# Thank you !

Q & A