



Apache Dubbo (Incubating)

--Present and Future

Agenda



What's Dubbo

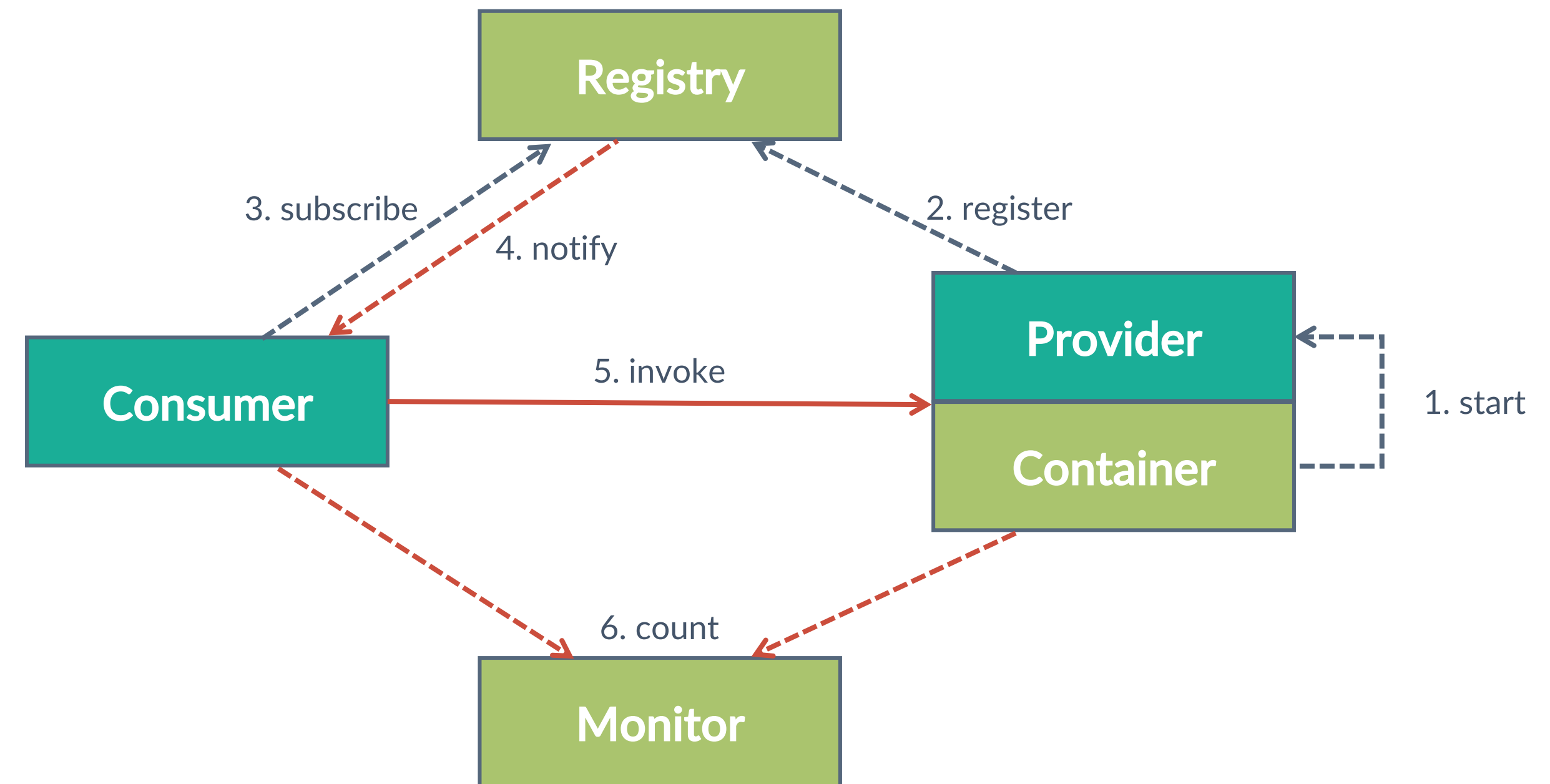
A high performance RPC framework

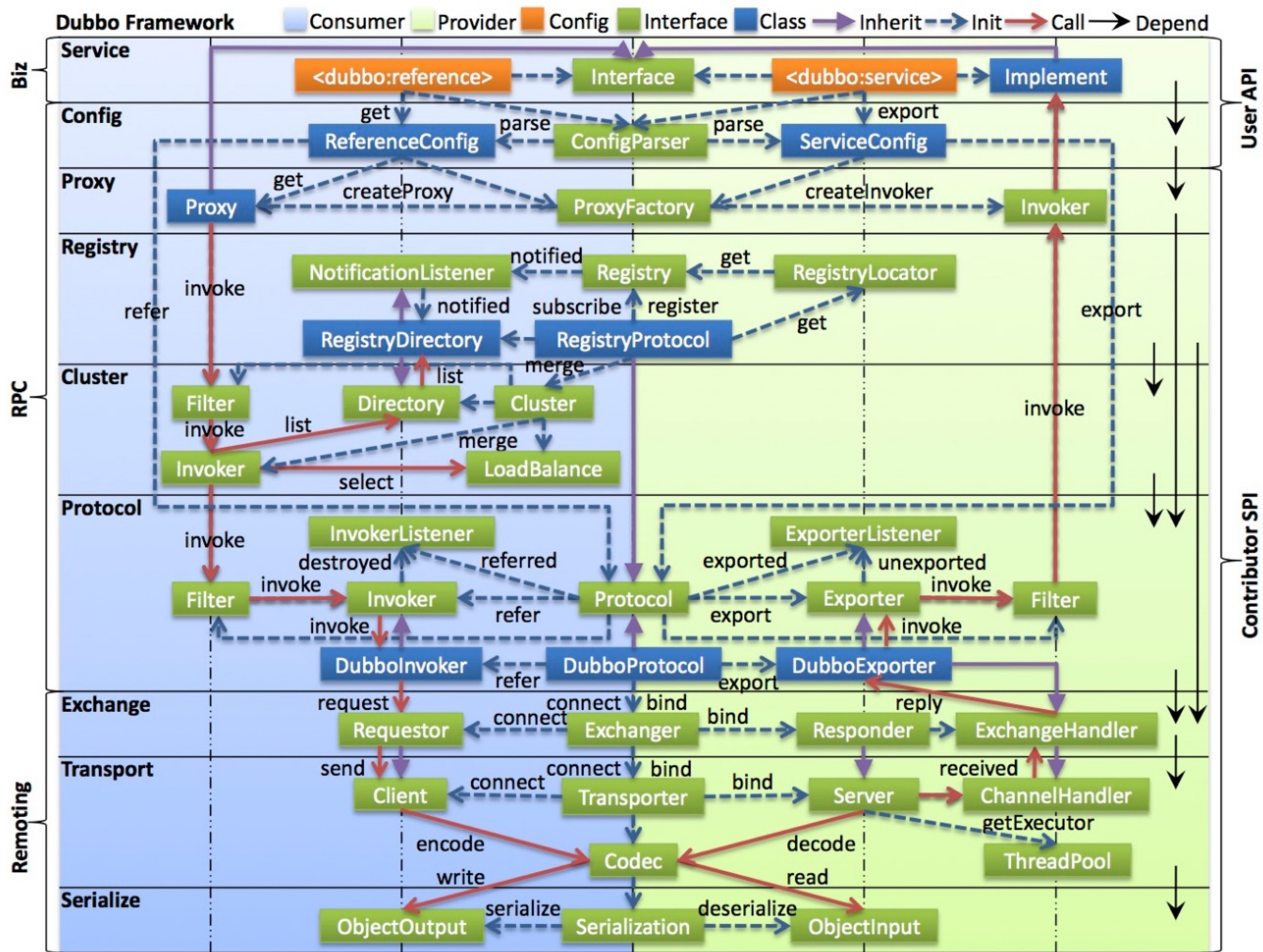
- ✓ **Open Sourced Project Incubating at Apache**
Dubbo ['dʌbəʊ] is a java based RPC framework first open-sourced by Alibaba at 2011. Donated to Apache at 2017.
- ✓ **A high performance RPC framework**
Based around the idea of defining a service, specifying the methods that can be called remotely with their parameters and return types.
- ✓ **Beyond RPC: rich features for service governance**
Provides features for managing microservices: automatic service registration & discovery, fault tolerance, load balancing, traffic management...
- ✓ **Production-tested and Proven At Scale**
Wildly adopted in internet companies and financial organizations in production for years, including Alibaba, JingDong, Kaola, Qunar, etc.

How Dubbo Works

A high performance RPC framework

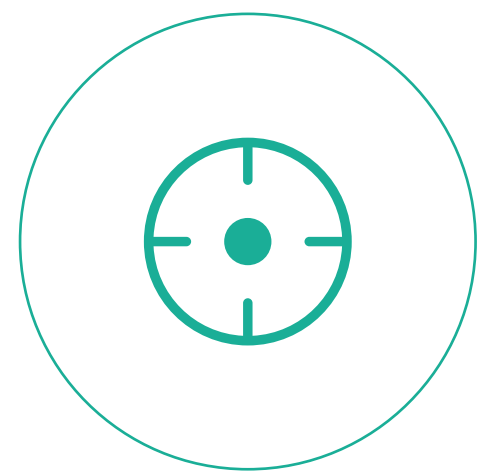
- 1 Export**
Provider export services at a specified port.
- 2 Service Register**
Provider register service metadata to registry.
- 3 Subscribe**
Consumer subscribe services it interests from Registry.
- 4 Service Discover**
Registry pushes service instances to Consumer
- 5 Invoke**
Consumer select a service provider, start remote call.
- 6 Monitor**
Monitor collect and display invoke statistics.





Why Maintain Dubbo

The reason we restart maintain Dubbo



Strategy

Alibaba announced the development strategy of embracing Open Source at Yunqi Con. **150+** Open Source projects, ranking top **10**, **170K+** total stars



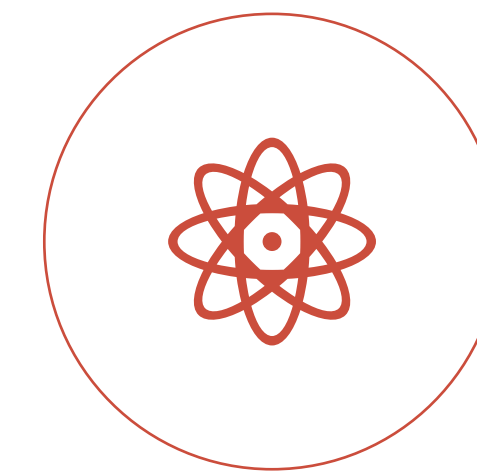
Community

Dubbo was widely adopted by organizations. There are plenty of requirements and issues reported by community.



Eco-System

Around Dubbo, we can create a thriving ecosystem, a one-stop micro service governance solution.



Feedback

Ideas from community can inspire us ; Community can also benefit from our experience in large-scale cluster and service management.

Current Status

A star project at Github

Stars increased

77%

Since re-maintain at 2017-07, we have seen the Stars, Forks and Watches increased by **7428**, **3072** and **745** respectively.

Ranked 11th in Java category at Github, 2000 UV/day. At OSC 2017, Druid, FastJson, Dubbo, RocketMq has been voted to the list of 「China's most popular open source software TOP20」.

Now Dubbo is an incubating project at Apache.

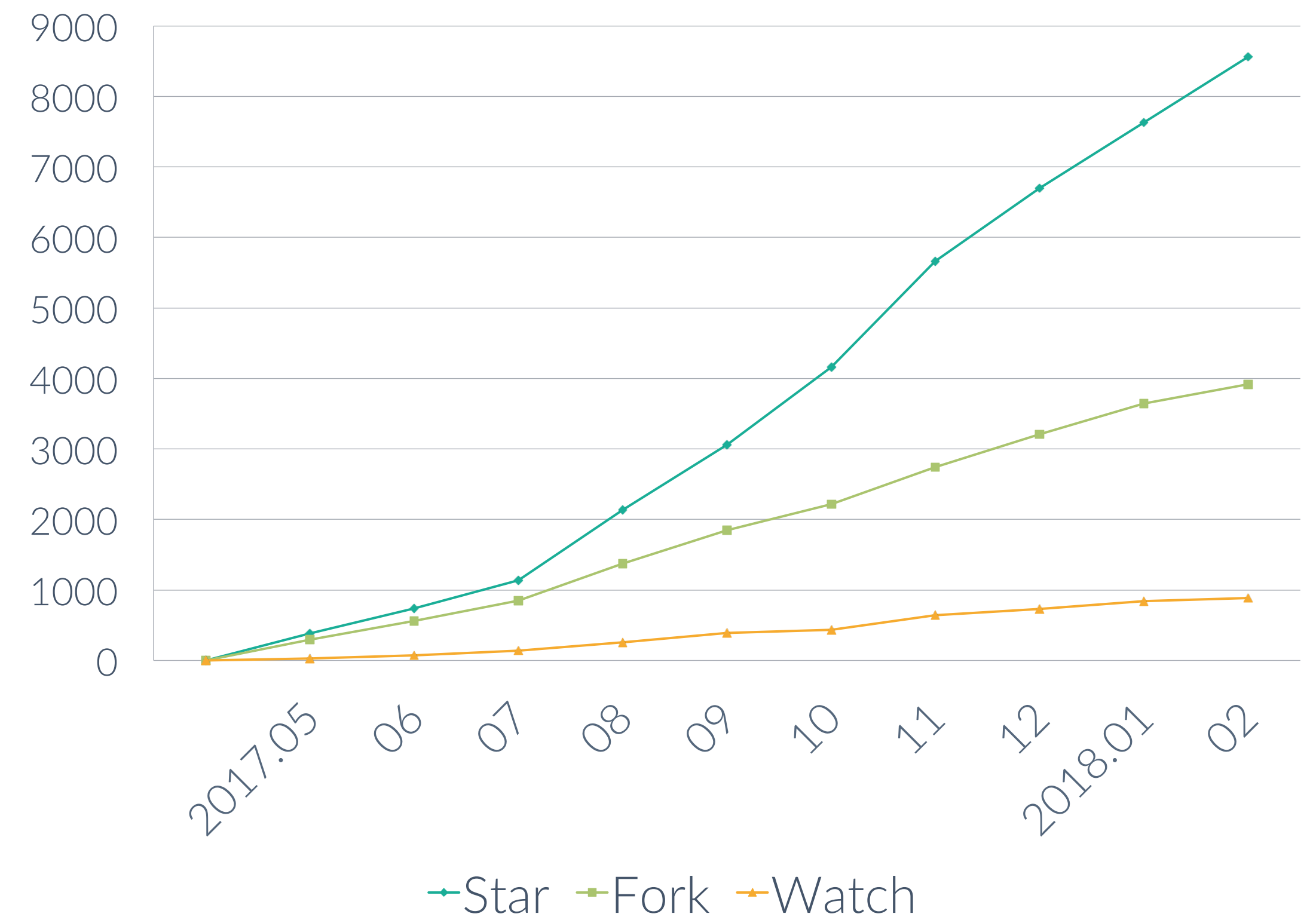


18K
STAR

12K
FORK

3K
WATCH

Github Increasement



Current Status

Dubbo in production



If you are using Dubbo, please let us know: <https://github.com/apache/incubator-dubbo/issues/1012>

According to a survey recently. Dubbo user can be classified into three types: Internet companies, traditional companies embracing Internet, Companies providing Internet solutions.

Dubbo have Apache PPMC from Dangdang, Qunar, Weidian and Alibaba.

The Dubbo team plans to hold several meetups in Beijing, Shanghai, Shenzhen and Hangzhou. The ideas and speakers be discussed and selected from community.

Current Status

What have we done



Upgrade dependencies to the latest version: Spring, ZK, Hessian, Netty, Javassist, Validator, etc.
Dependencies



Meet requirements in community: REST, Spring Boot, Hessian, QOS, etc.

Community



Apache

Docs and Website



Releases



dubbo.apache.org enriches with quick start, docs, samples, community;
Rewrite docs using gitbook.

Keep a relatively quick release cycle, within 11 month:
7 maintainece releases.
3 feature releases.

Donated to Apache, we expect more developers and organizations get involved in the community.

Roadmap



Roadmap

Dubbo Core



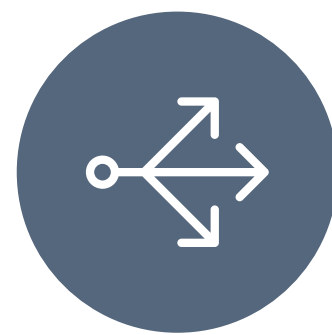
Modularization

The communication layer and service management layer are highly coupled to each other.



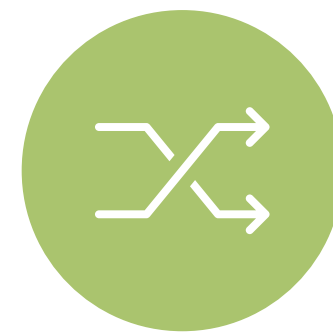
Service Metadata

Metadata need classified by purpose: service maintenance, remote call, dynamic properties. Big pressure for Registry and User when stored in one URL.



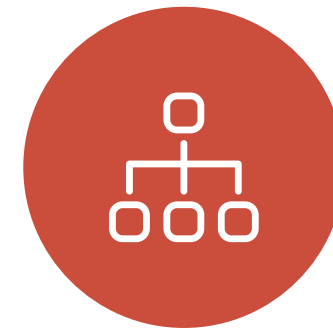
Traffic Routing

Provides more routing policies: condition, script, enabling argument routing, zone-aware routing, canarying, and more.



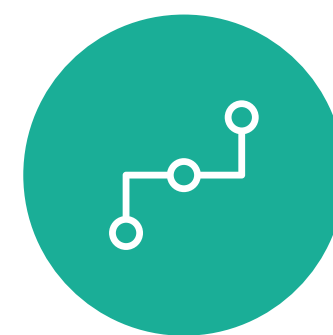
Fault Tolerant

Make Dubbo applications more stable by introducing short-circuit, isolation and flow-control and policies. Latency-aware LoadBalance policies.



Extremely large-scale clusters

Meet the challenges of large scale clusters: service discovery, memory footprint and addresses, CPU, etc.

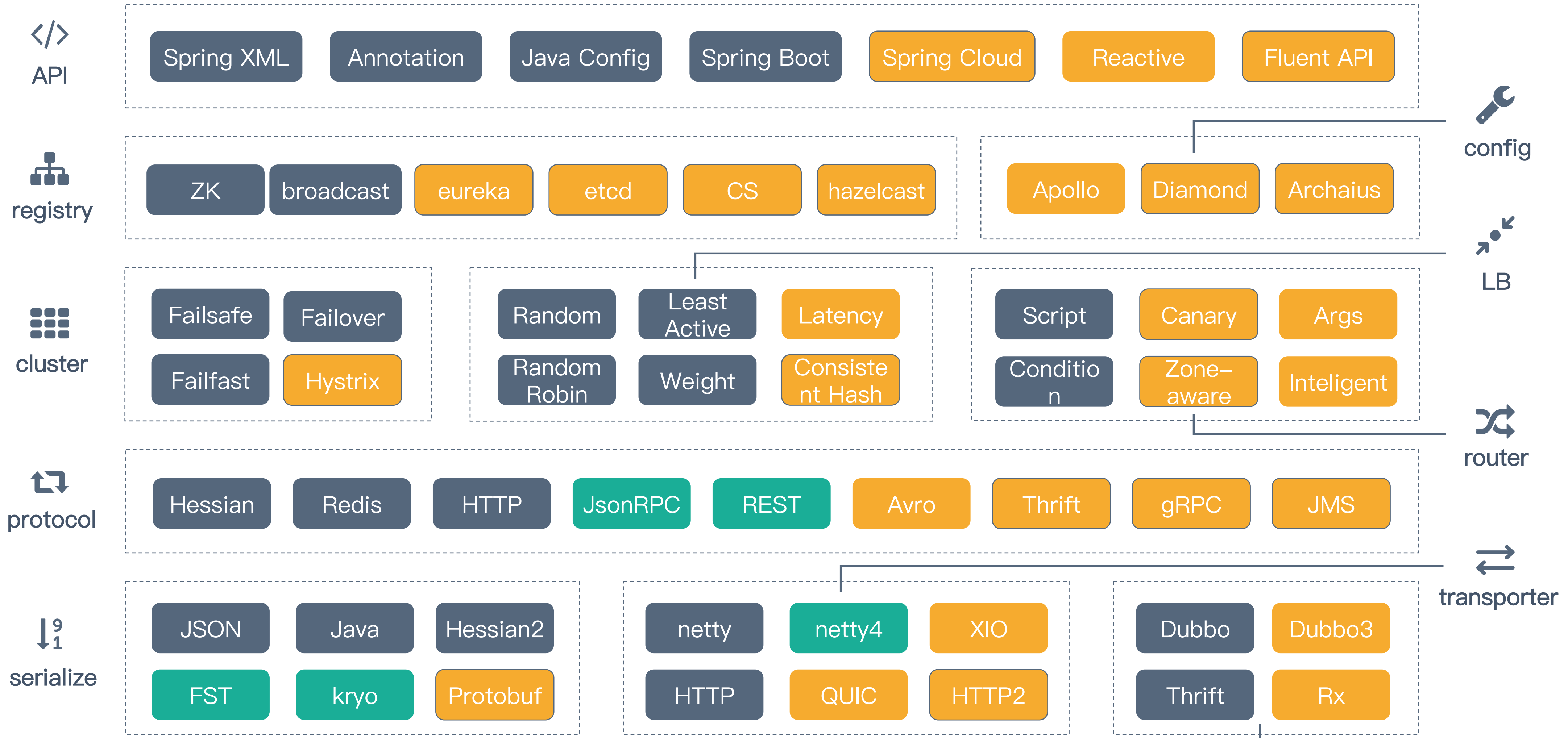


Asynchronism

Promote overall throughput and CPU utilization of distributed systems: asynchronous API, Reactive, Stream

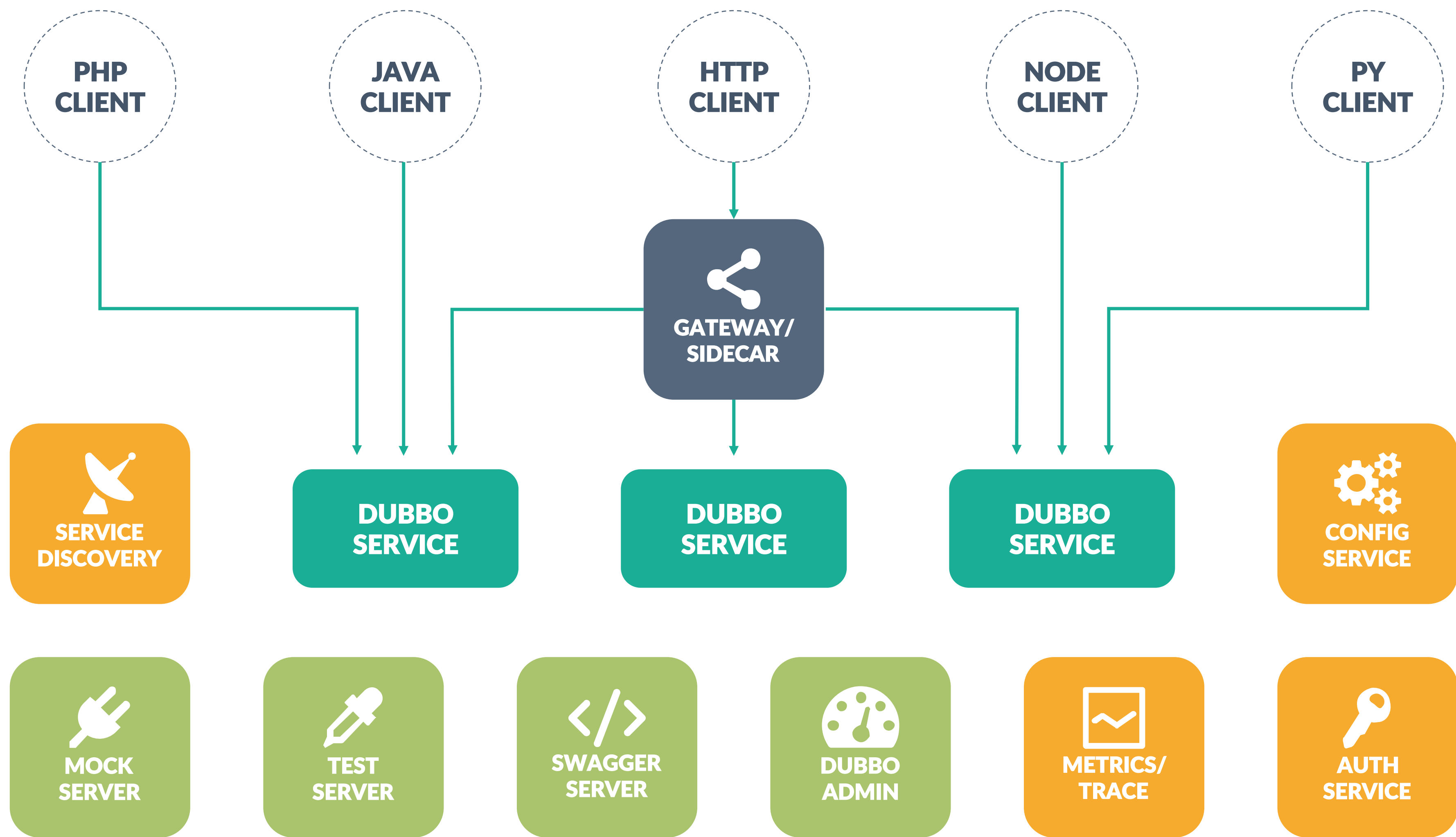
Roadmap

Eco-System – SPI Extension



Roadmap

Eco-System — Polyglot, Diversity, ...



dubbo.apache.org

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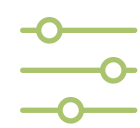
Roadmap

Cloud Native – Dubbo Mesh



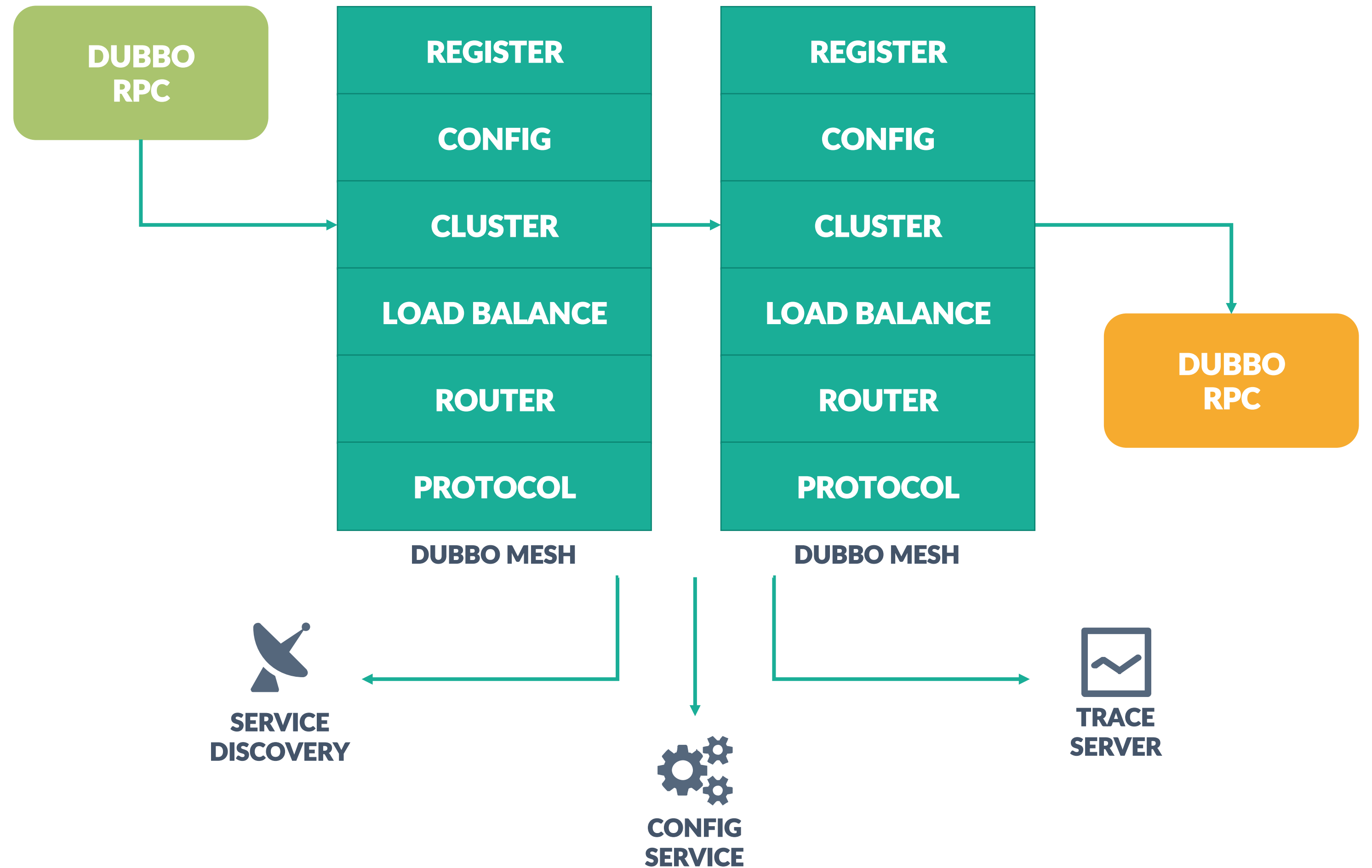
Service Mesh

Low level platforms are providing more capabilities that usually exists in higher level frameworks like Dubbo. Dubbo core itself can be more lightweight and Dubbo Mesh integrate with low level platforms as a data panel.



Polyglot

Developers can use any language in a cloud environment. A sidecar solution integrating service governance capabilities can easily support multi-languages. And this is a problem both Dubbo and Spring Cloud faces.



Dubbo at Apache

Community Over Code



Phase 1: Preparation

Spend nearly **3 months** in total. With 1 champion, 4 mentors. 1 week for proposal preparation, discussed and voted for 72h respectively, entered Incubating after 3 binding votes.



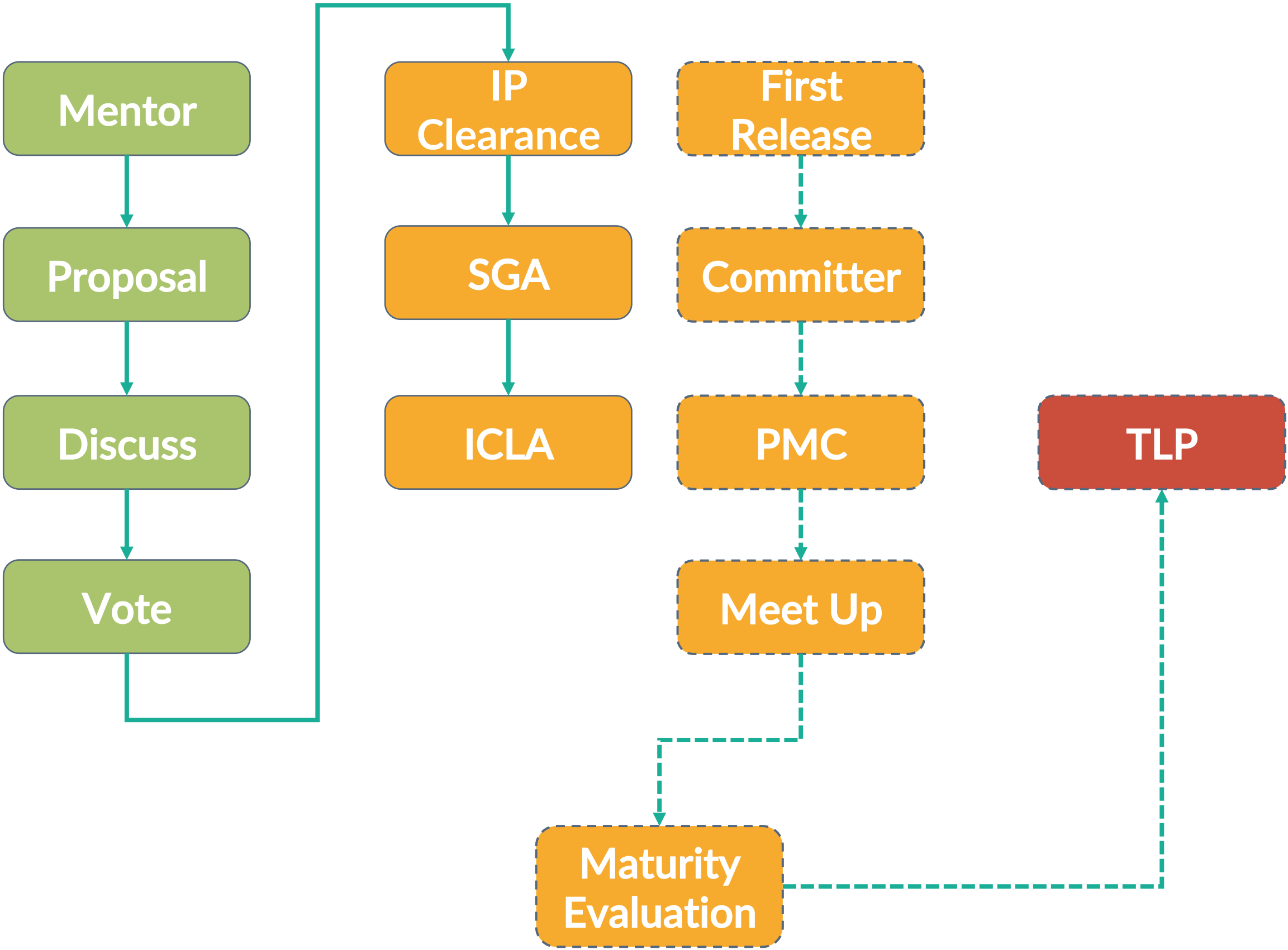
Phase 2: Incubating

This phase will take 8+ months. Asset transfer and community building are the most important part, Remember the Apache way: **community over code**



Phase 3: Graduation

We will pass the **maturity evaluation** and then **vote** for graduation.





Home

dubbo.apache.org

dubbo.io



GitHub

github.com/apache/incubator-dubbo

github.com/dubbo



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