

云原生运行时的下一个五年

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QCon+ 案例研习社



扫码学习大厂案例

学习前沿案例，向行业领先迈进

40⁺

热门专题

—
行业专家把关内容筹备，
助你快速掌握最新技术发展趋势

200⁺

实战案例

—
了解大厂前沿实战案例，
为 200 个真问题找到最优解

40⁺

直播答疑

—
40 位技术大咖，每周分享最新
技术认知，互动答疑

365⁺

持续学习

—
视频结合配套 PPT
畅学 365 天

个人介绍

- 目前在蚂蚁集团中间件团队负责 MOSN、Layotto 等项目的落地。
- 花名“古今”，取自《增广贤文》中“观今宜鉴古，无古不成今”。
- 专注于云原生，容器运行时，WebAssembly 等技术领域的发展。

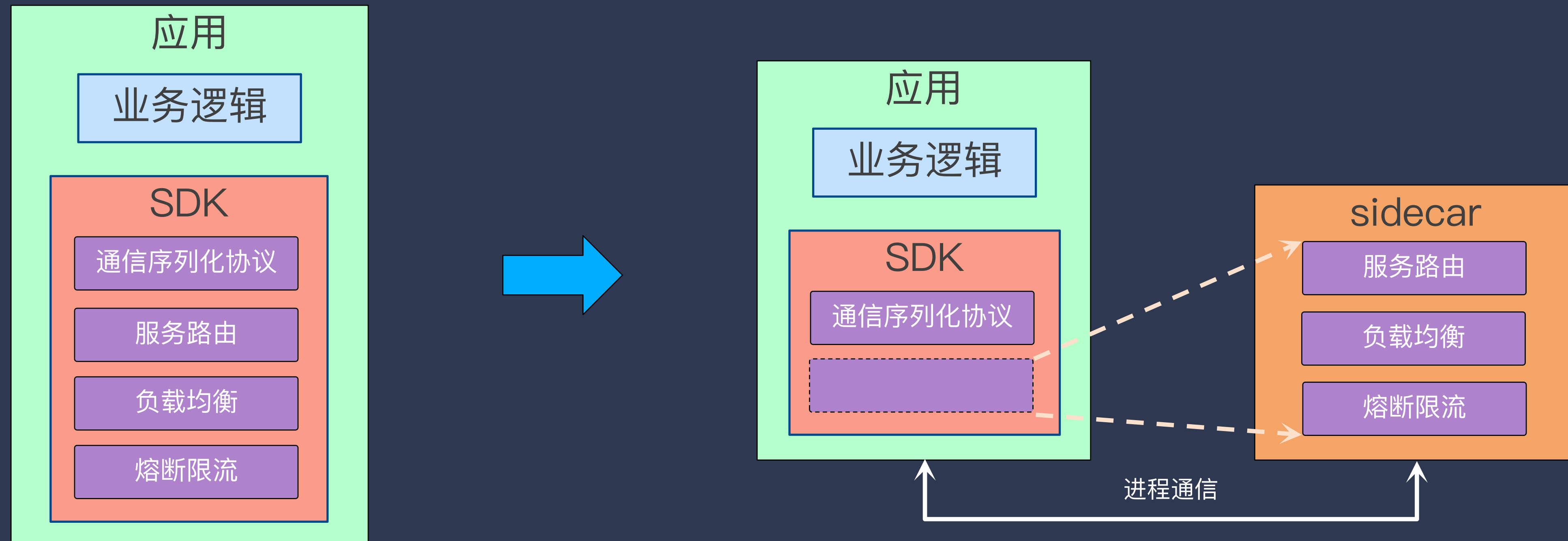
分享内容

- 从 Service Mesh 到应用运行时
- 重新定义基础设施边界
- 未来五年：函数是不是下一站？
- 开源与共赢

01

从 Service Mesh 到应用运行时

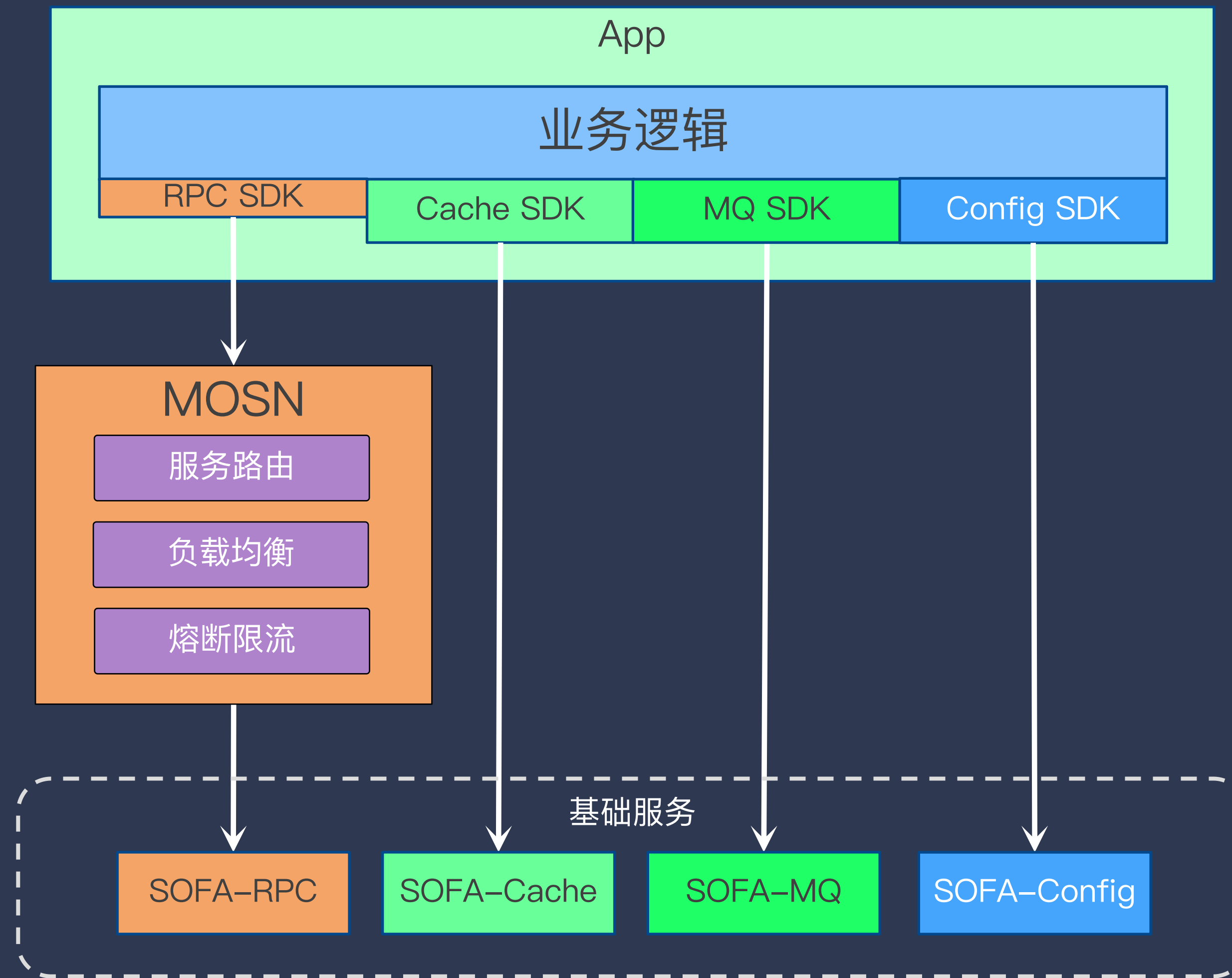
蚂蚁 Service Mesh 的实践与遗留问题



- 升级成本高
- SDK版本不统一
- 异构语言治理能力弱

- 业务解耦
- 平滑升级
- 异构语言治理

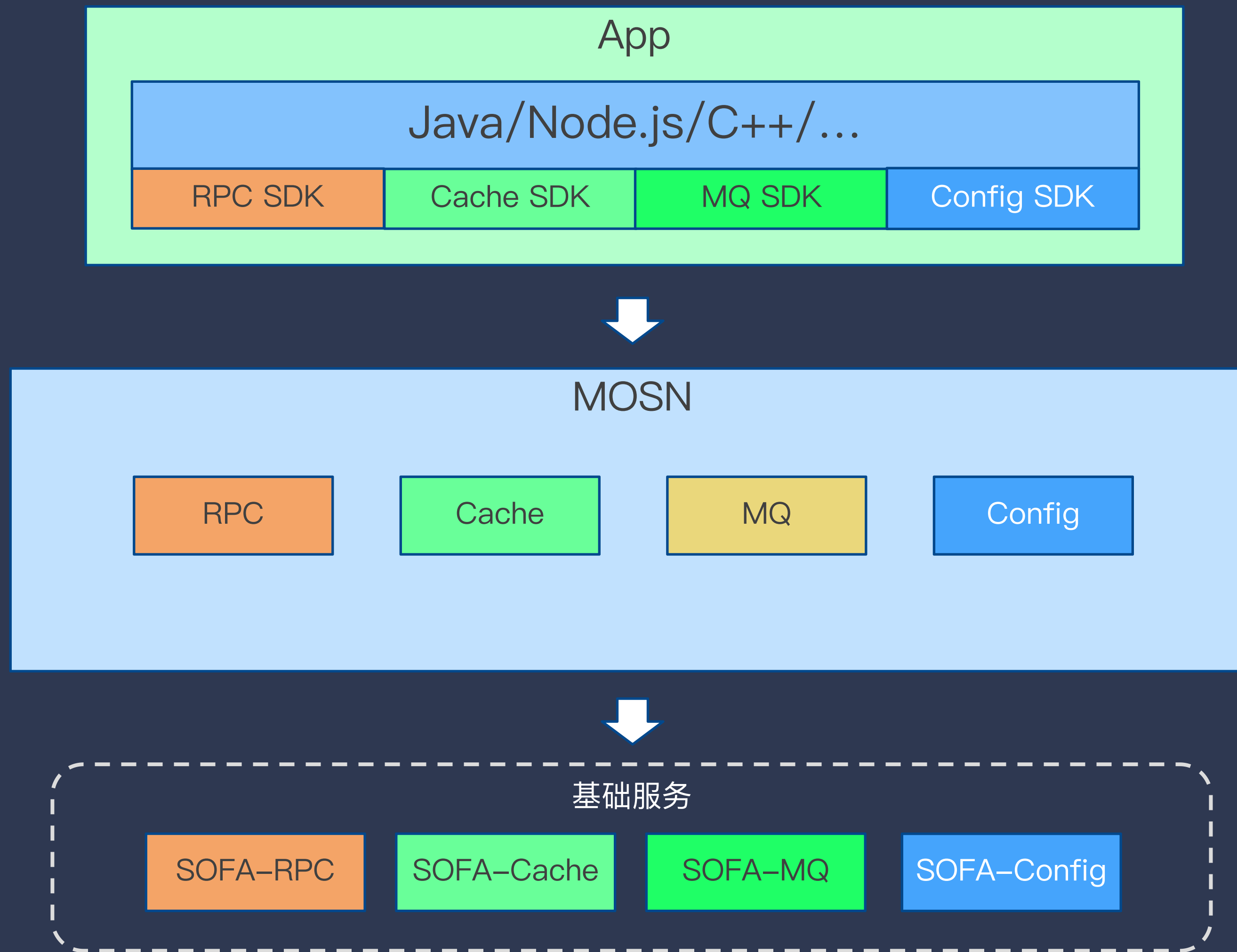
蚂蚁 Service Mesh 的实践与遗留问题



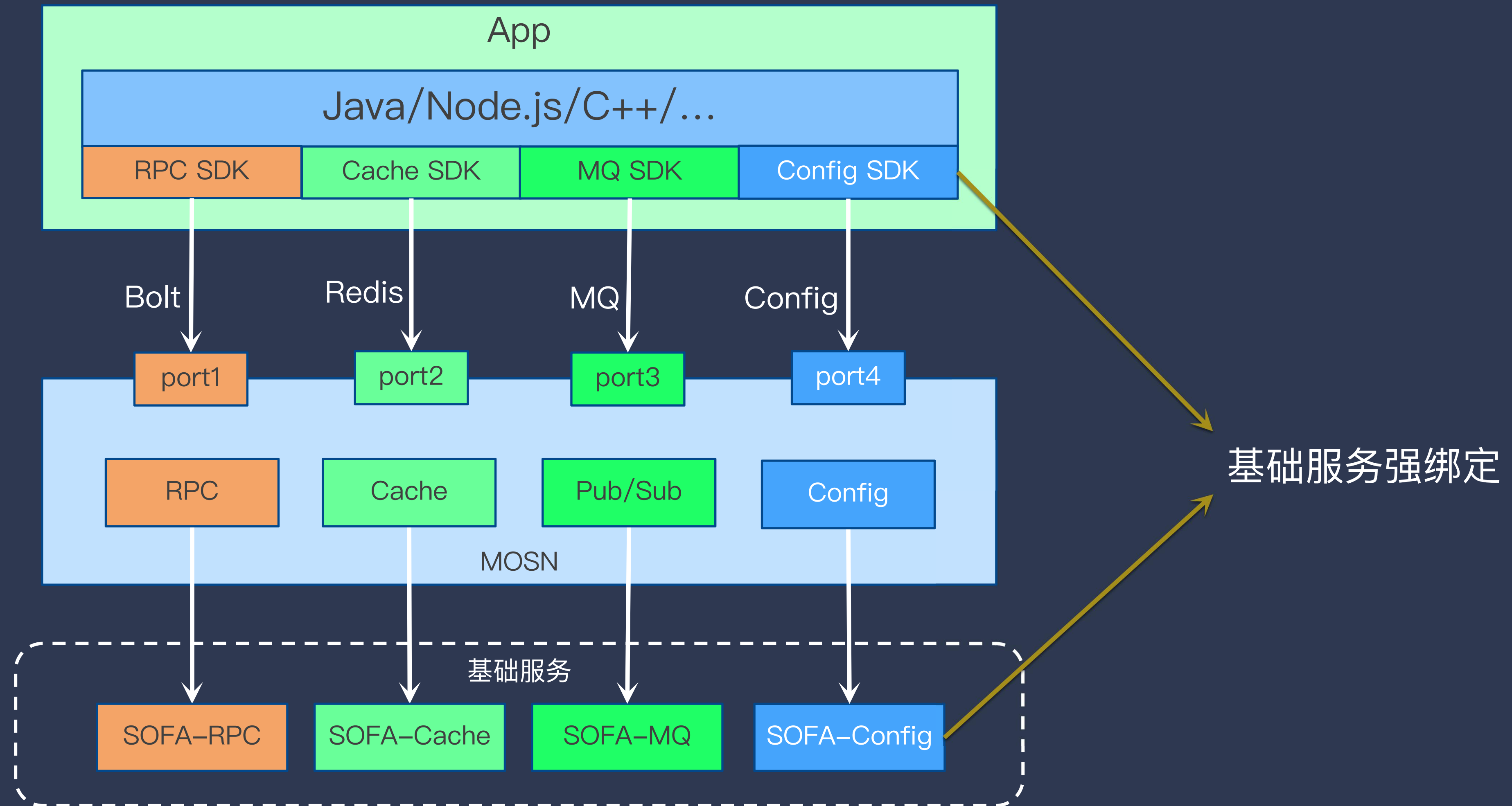
数千应用
数十万容器

升级频率
1~2次/月

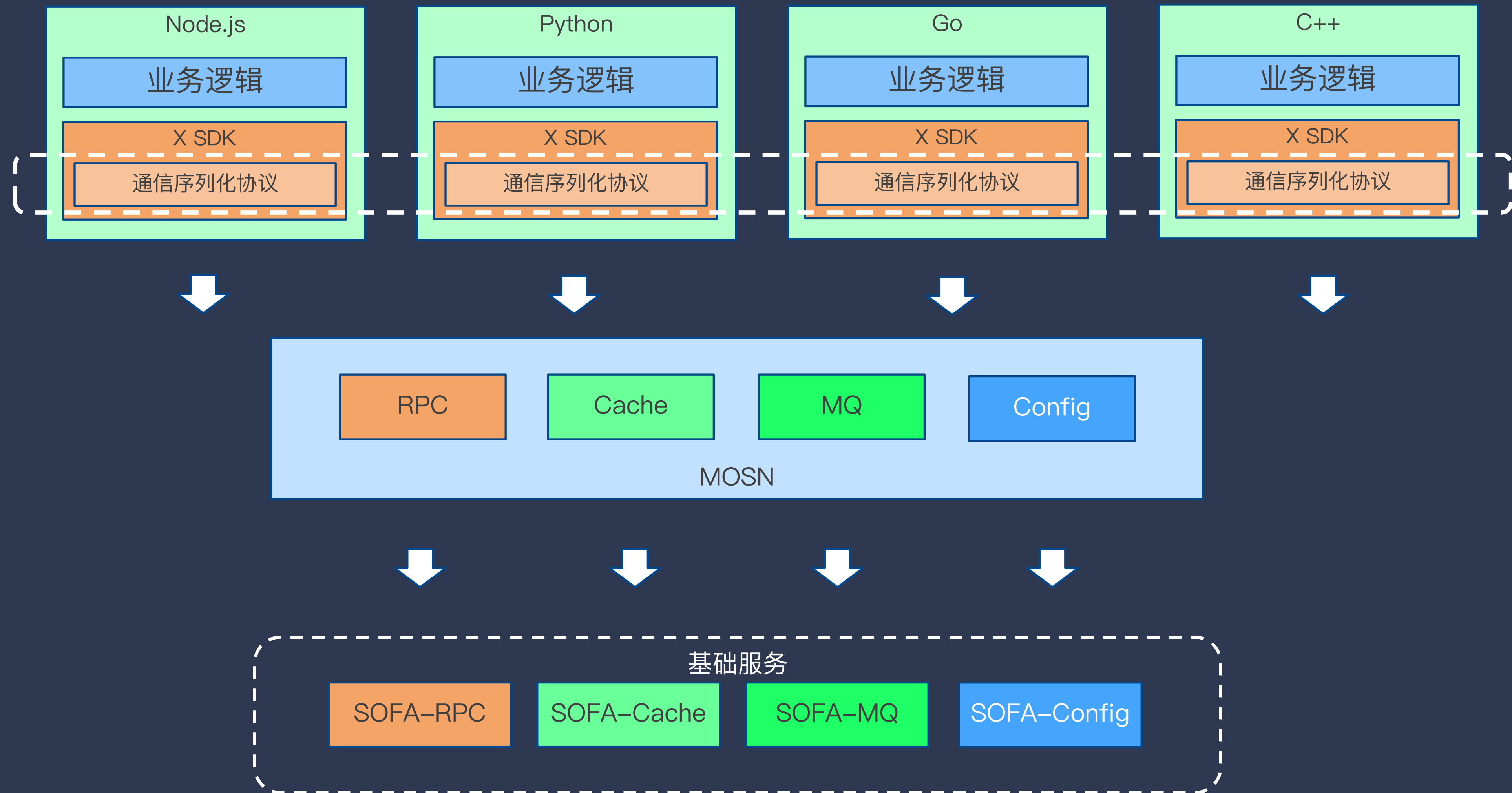
蚂蚁初步泛 Mesh 化的探索



蚂蚁初步泛 Mesh 化的探索



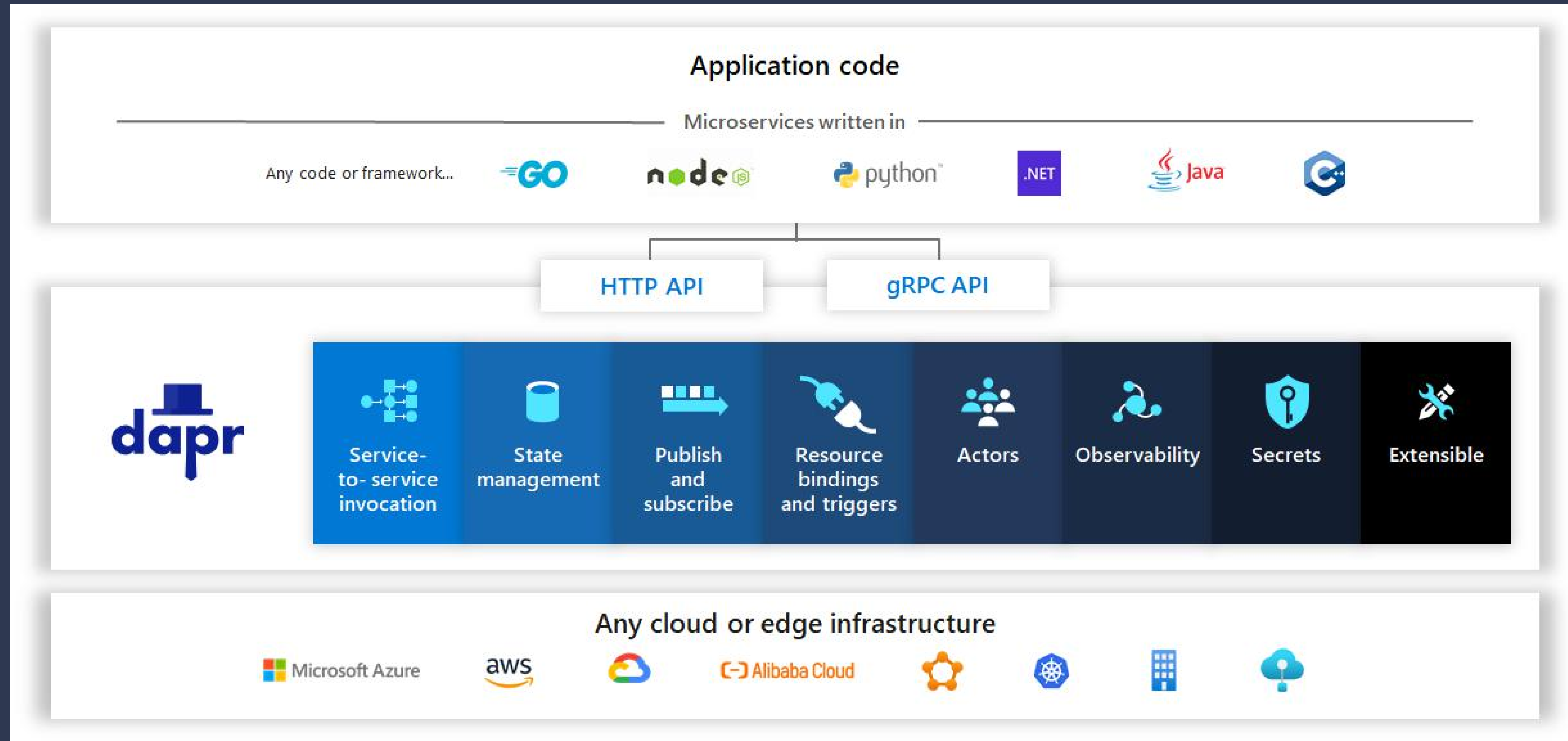
蚂蚁初步泛 Mesh 化的探索



02

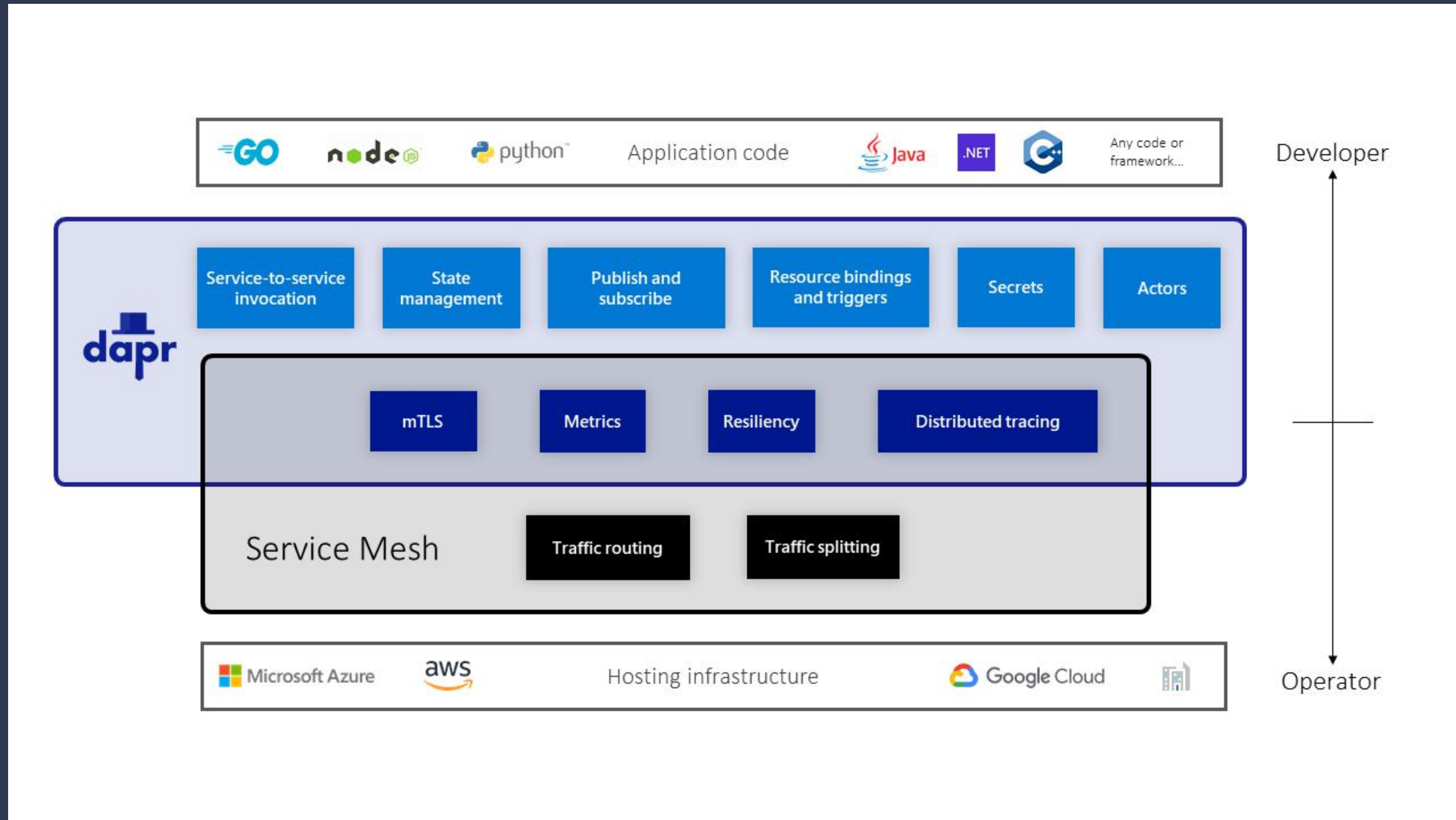
重新定义基础设施边界

如何看待 dapr

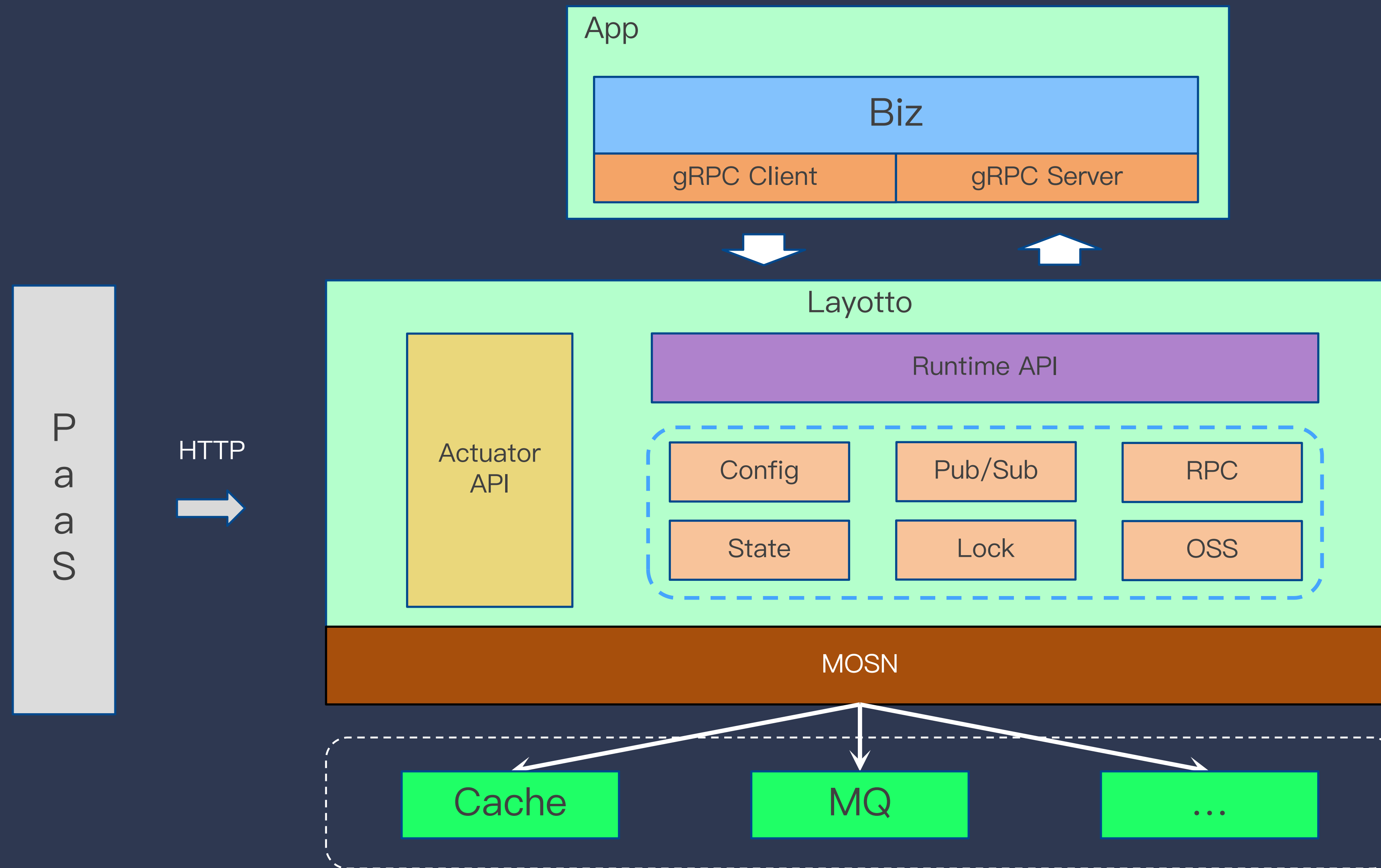


- 提供多种分布式能力
- 对接了丰富的基础组件

如何看待 dapr

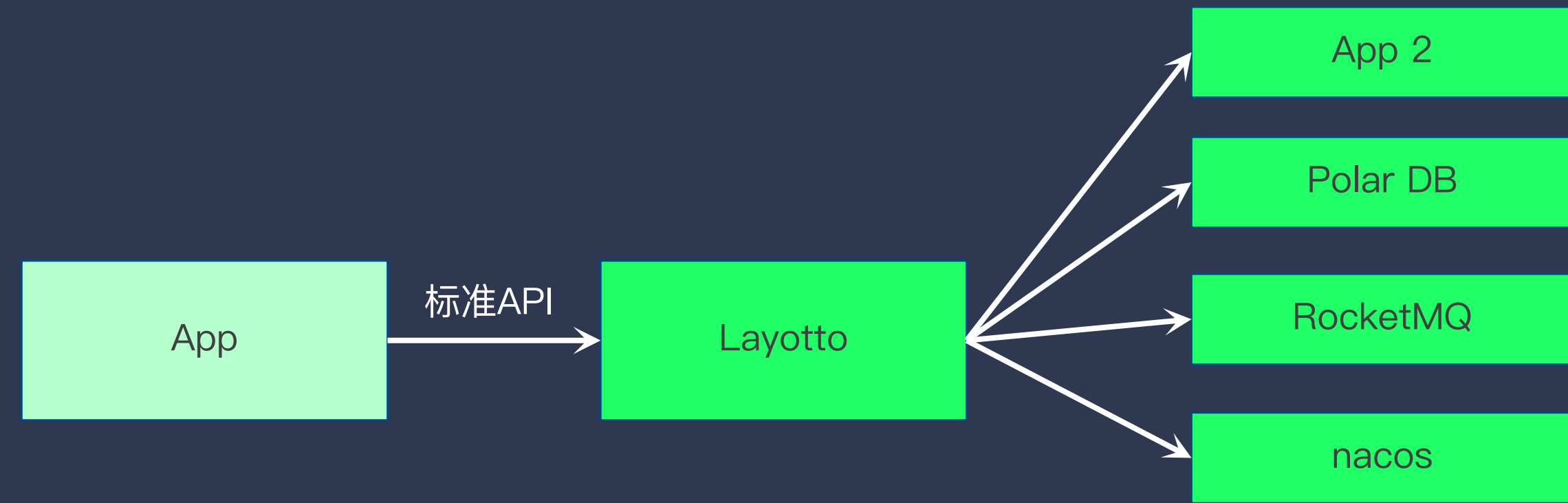
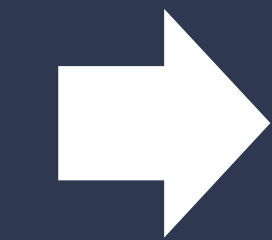


Layotto: 架构设计

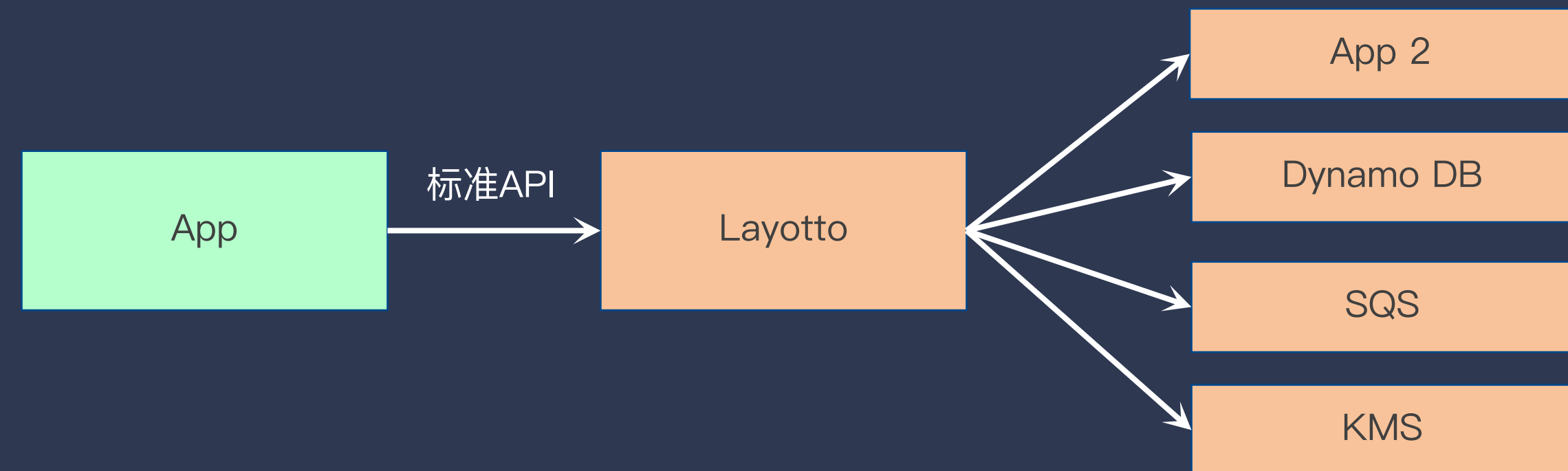


Layotto: 可移植性

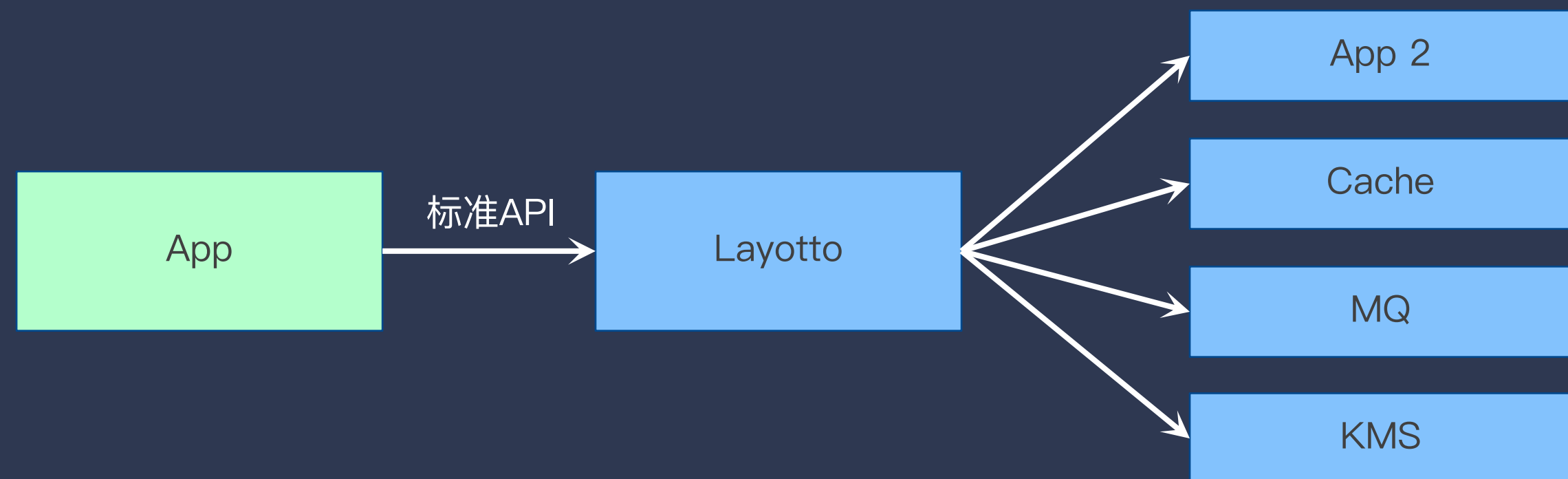
Application Code



阿里云



aws

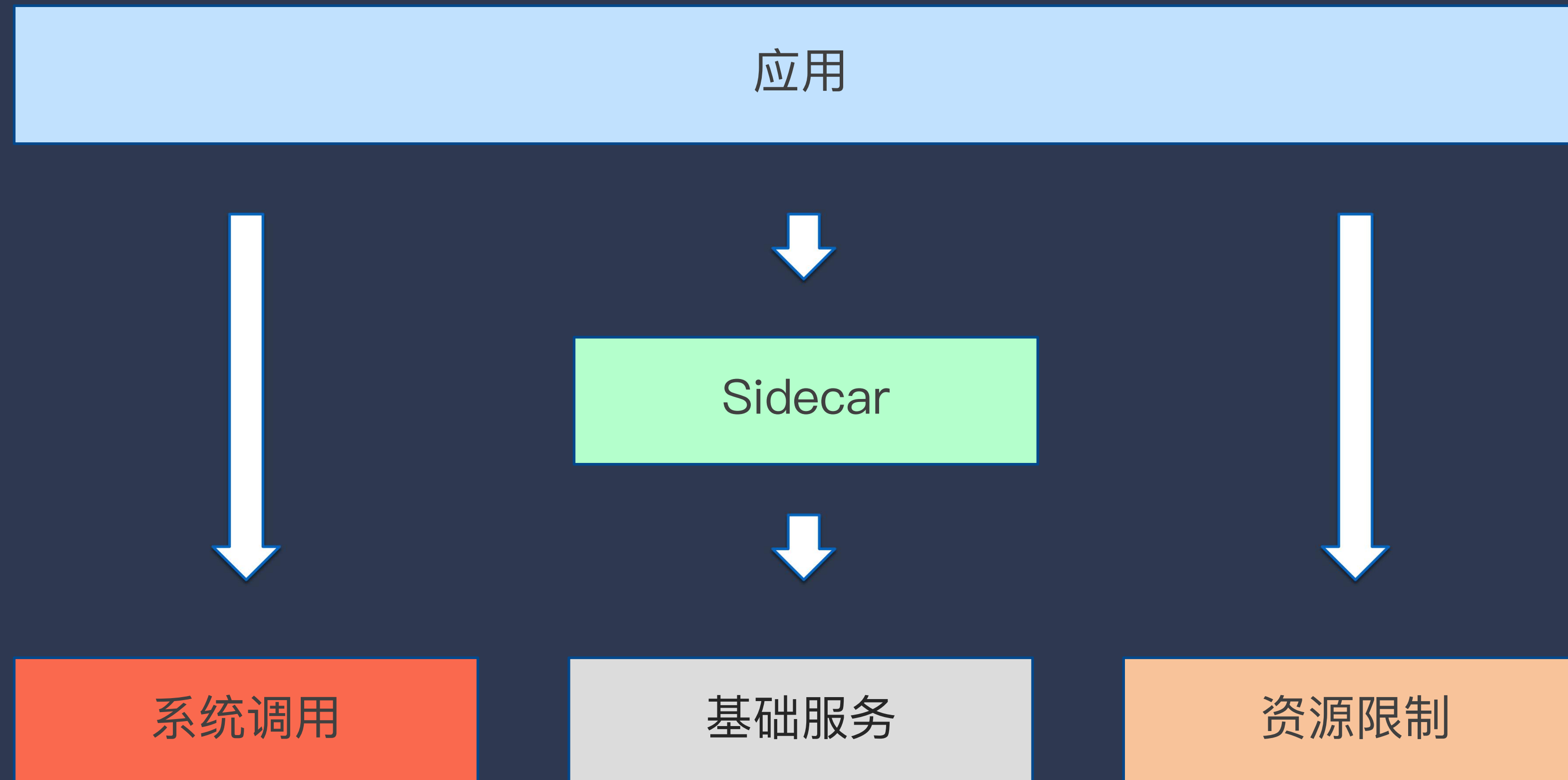


蚂蚁集团
ANT GROUP

为什么不在一个 Sidecar 里解决所有?



那么...应用绕过 Sidecar 会如何?



统一的边界：Layotto 的愿望

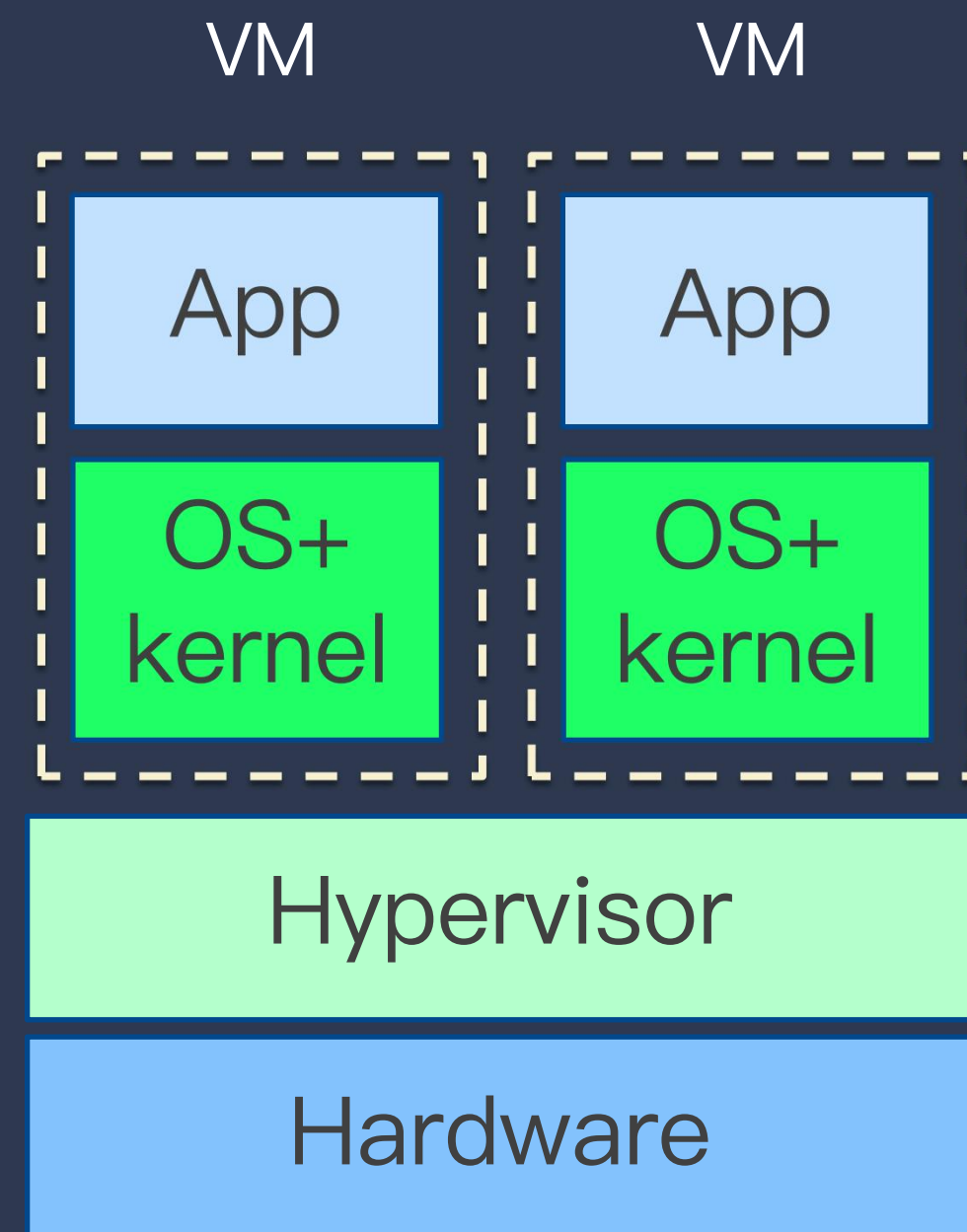


- 安全边界
- 服务边界
- 资源边界

03

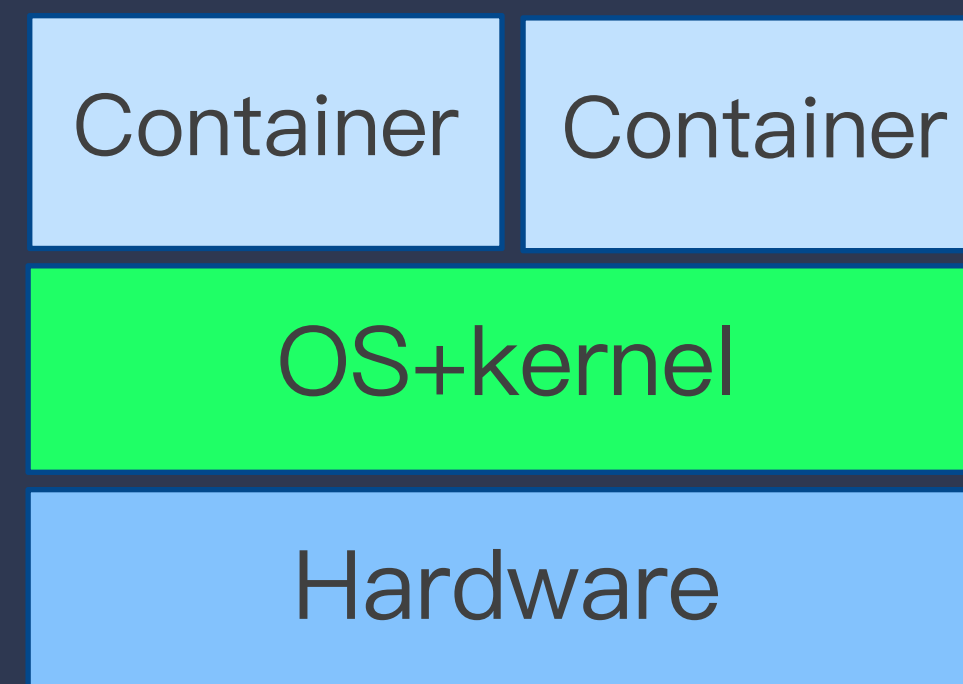
未来五年：函数是不是下一站？

Layotto 与蚂蚁函数化的明天



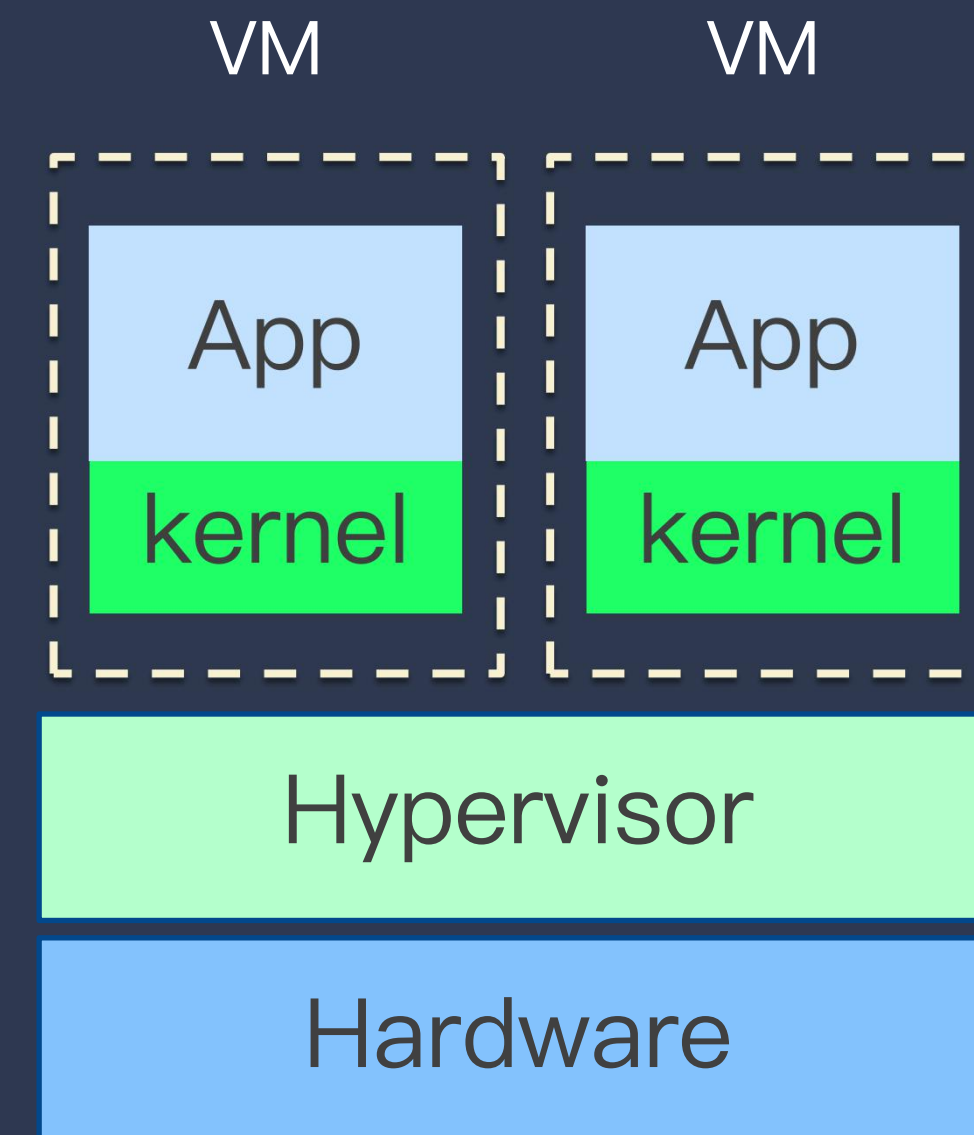
虚拟机

VS



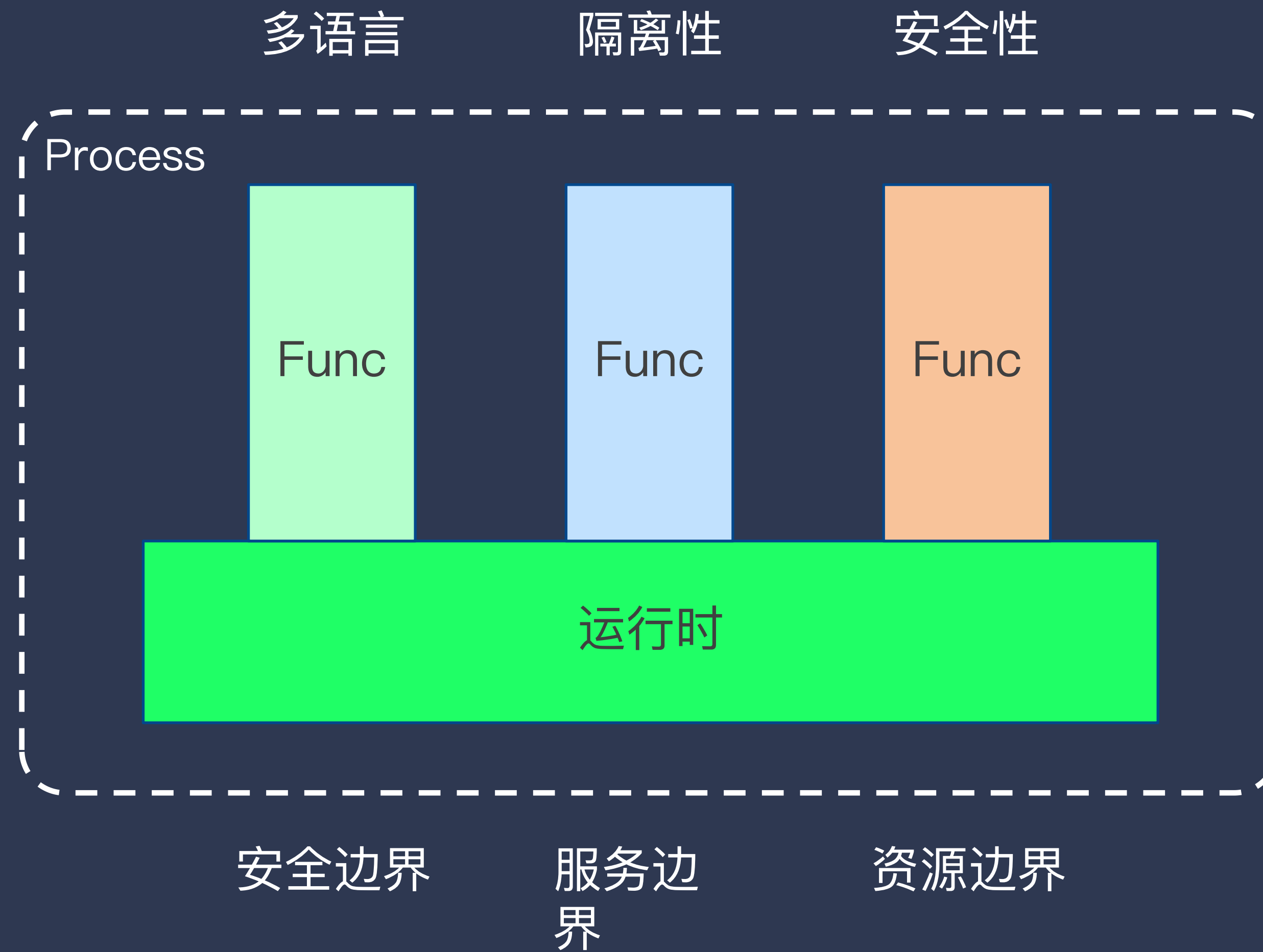
容器

VS

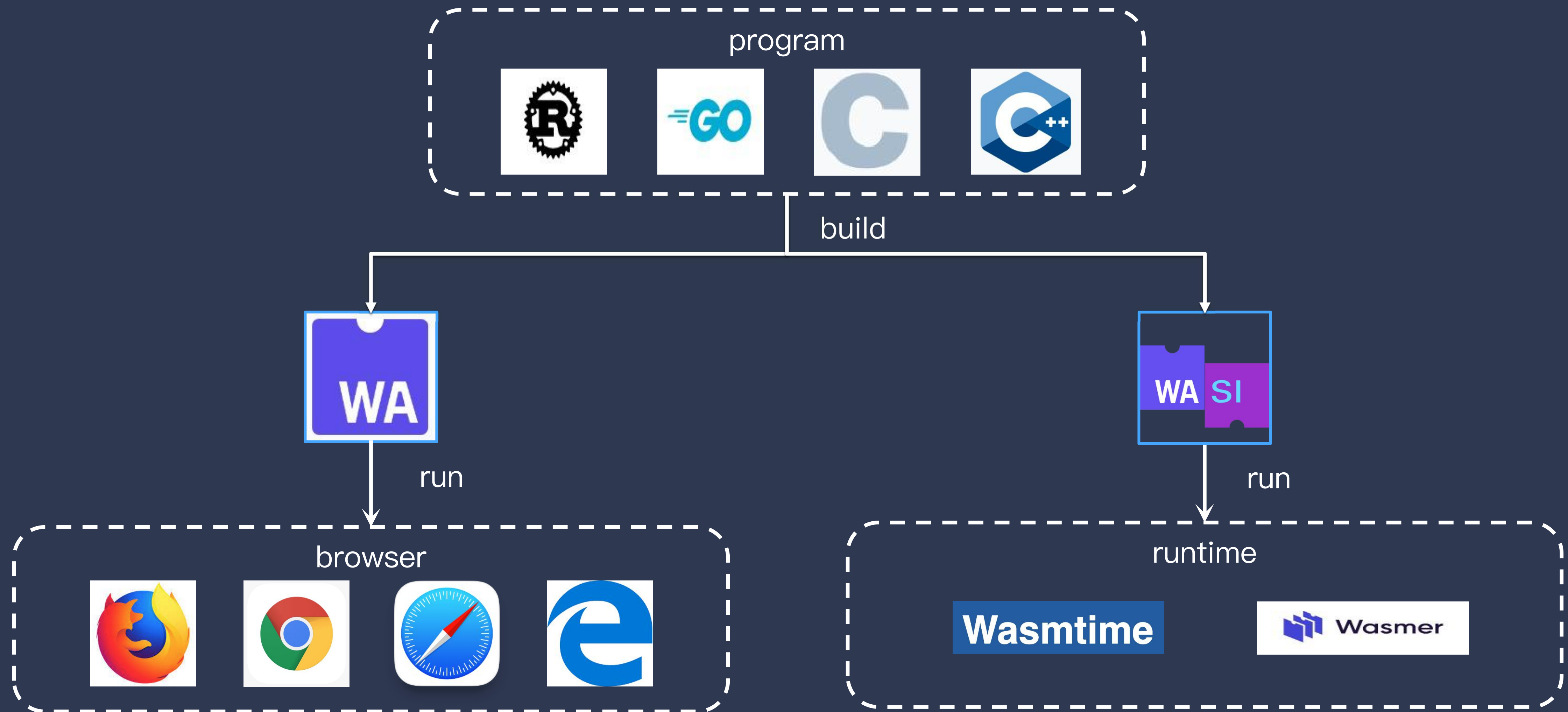


Unikernel

跳过，再跳过，函数能不能成为云原生时代的一等公民？



风口浪尖上的 WebAssembly (Wasm)



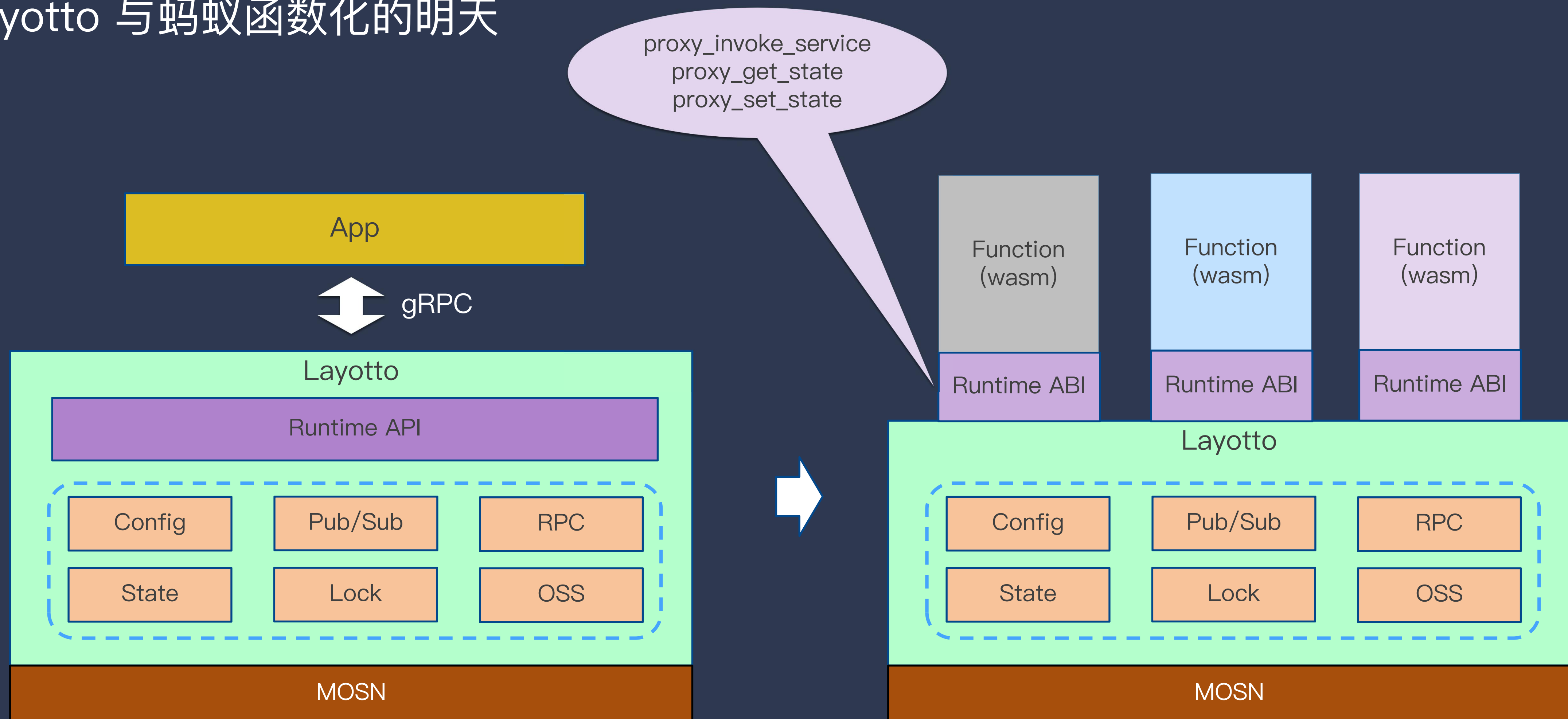
风口浪尖上的 WebAssembly (Wasm)

- 语言无关，跨平台
- 安全性，体积小
- 沙箱执行环境
- 各语言支持程度不同
- 生态不完善
- 各种运行时能力参差不齐

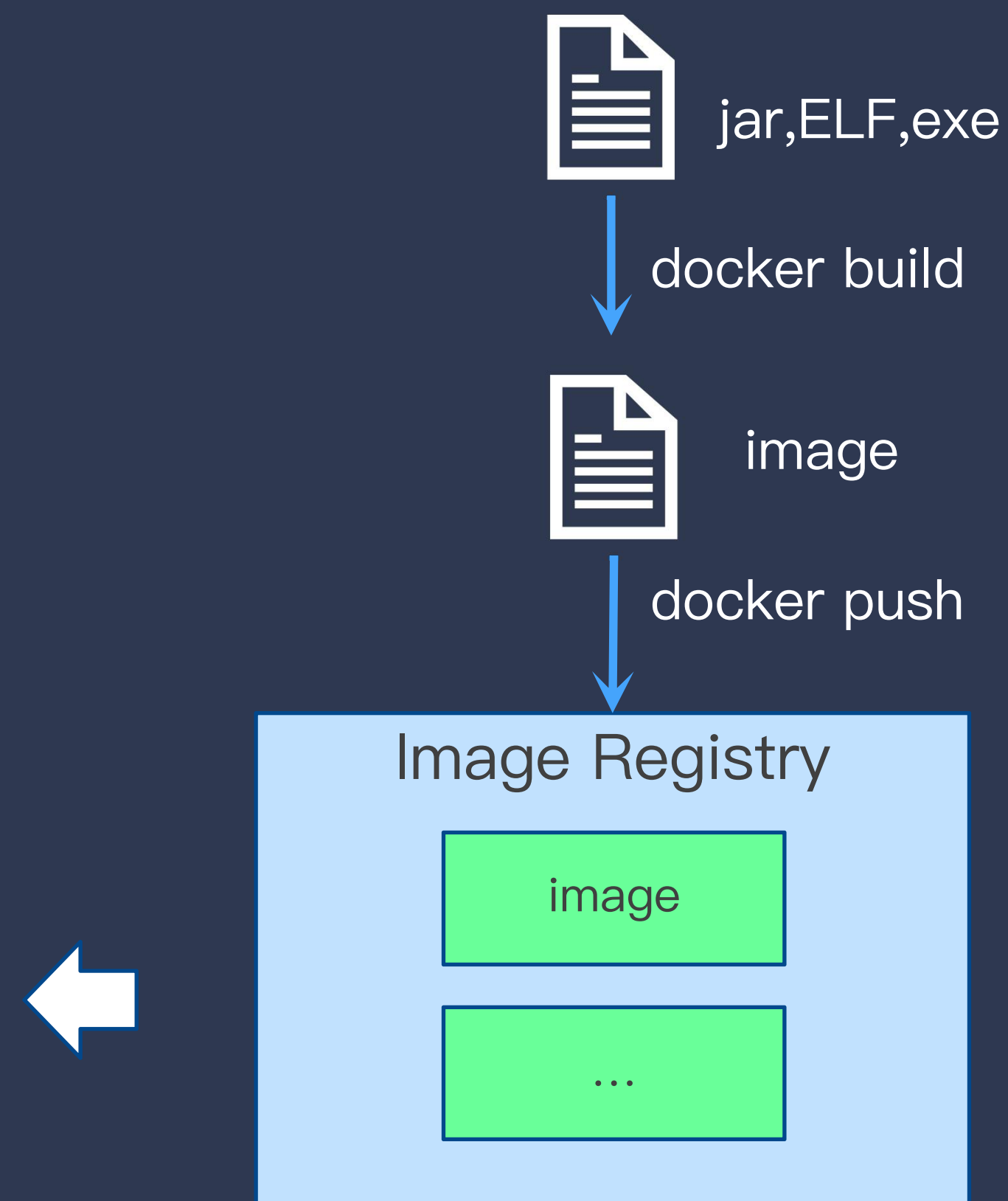
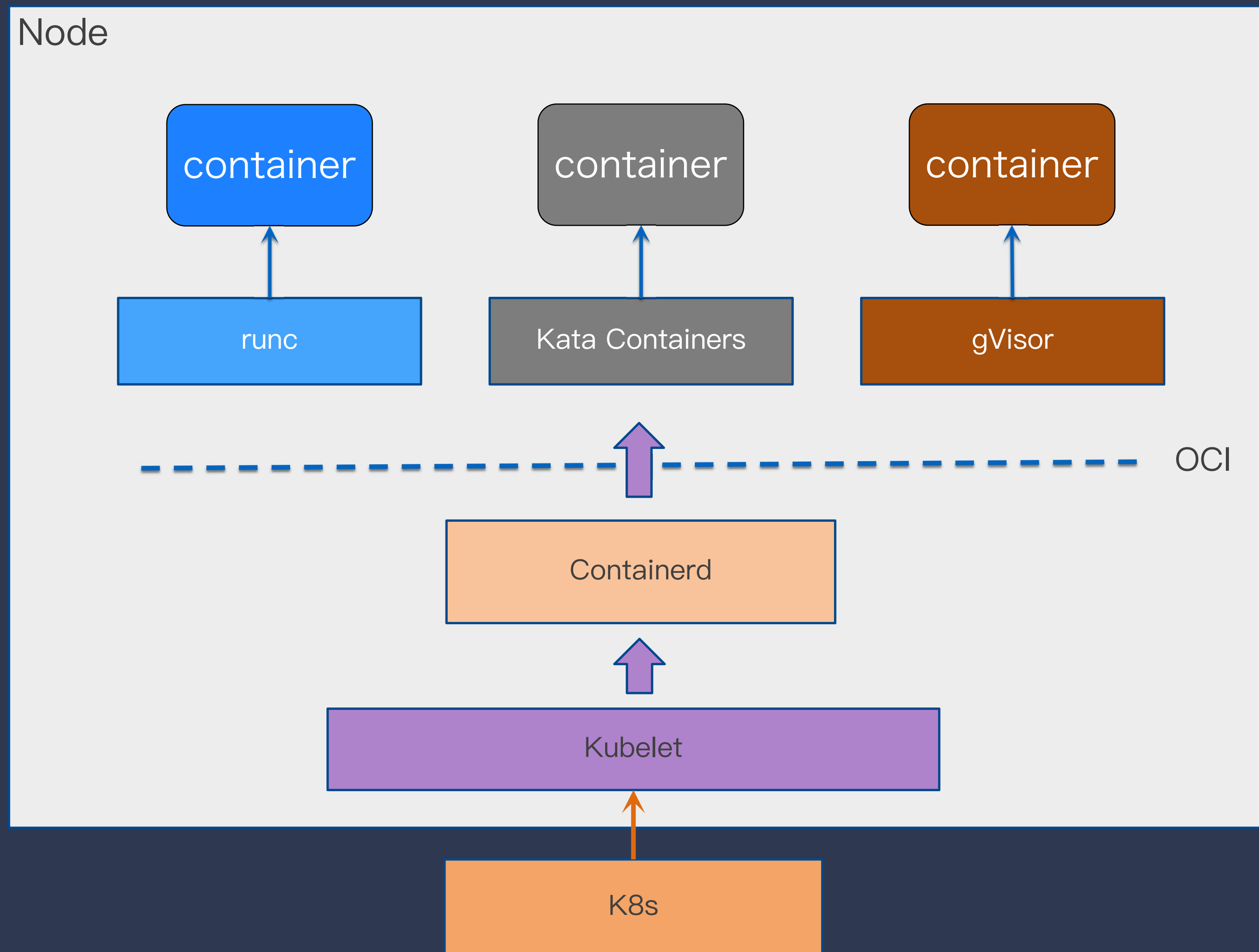
Layotto 与蚂蚁函数化的明天



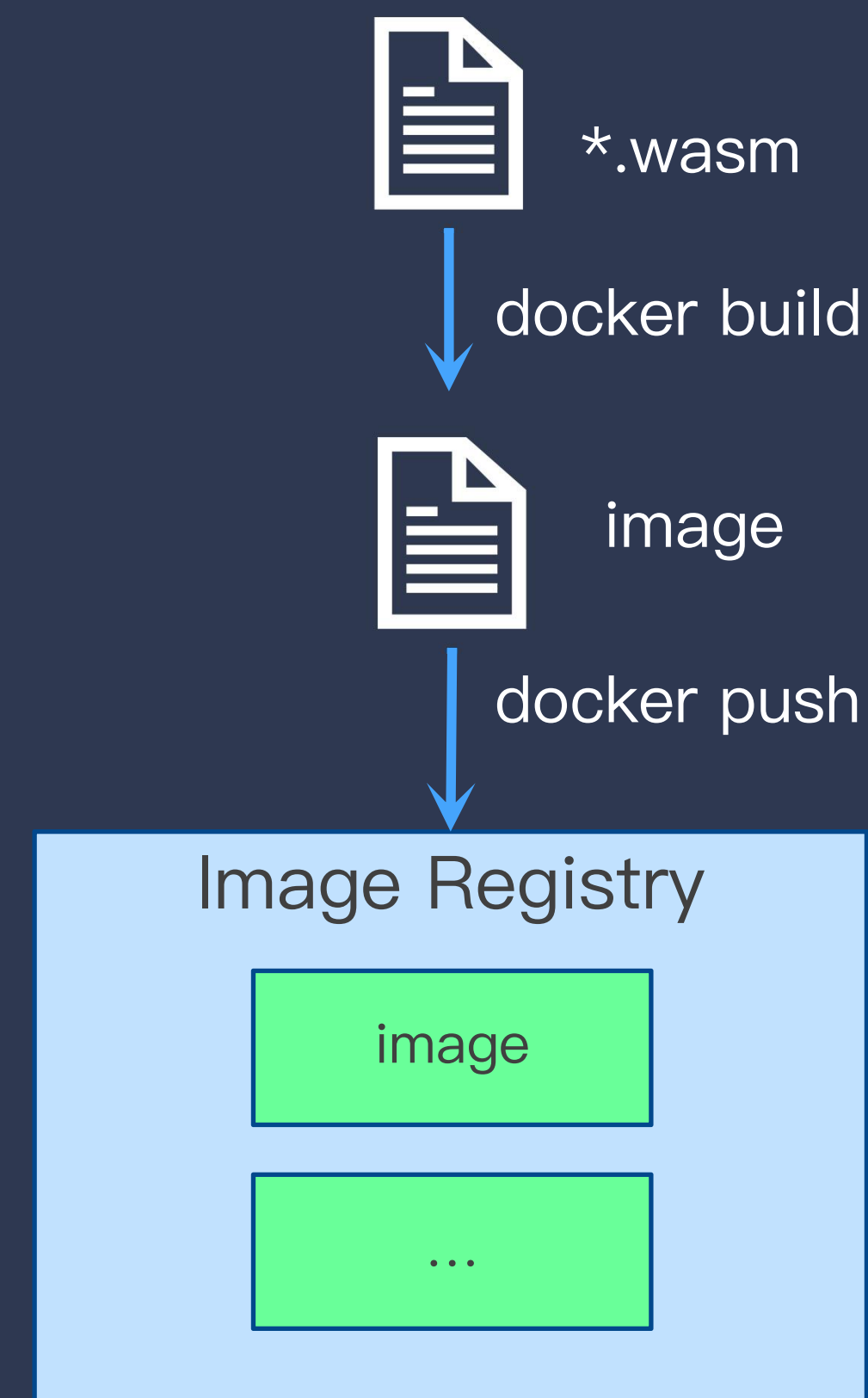
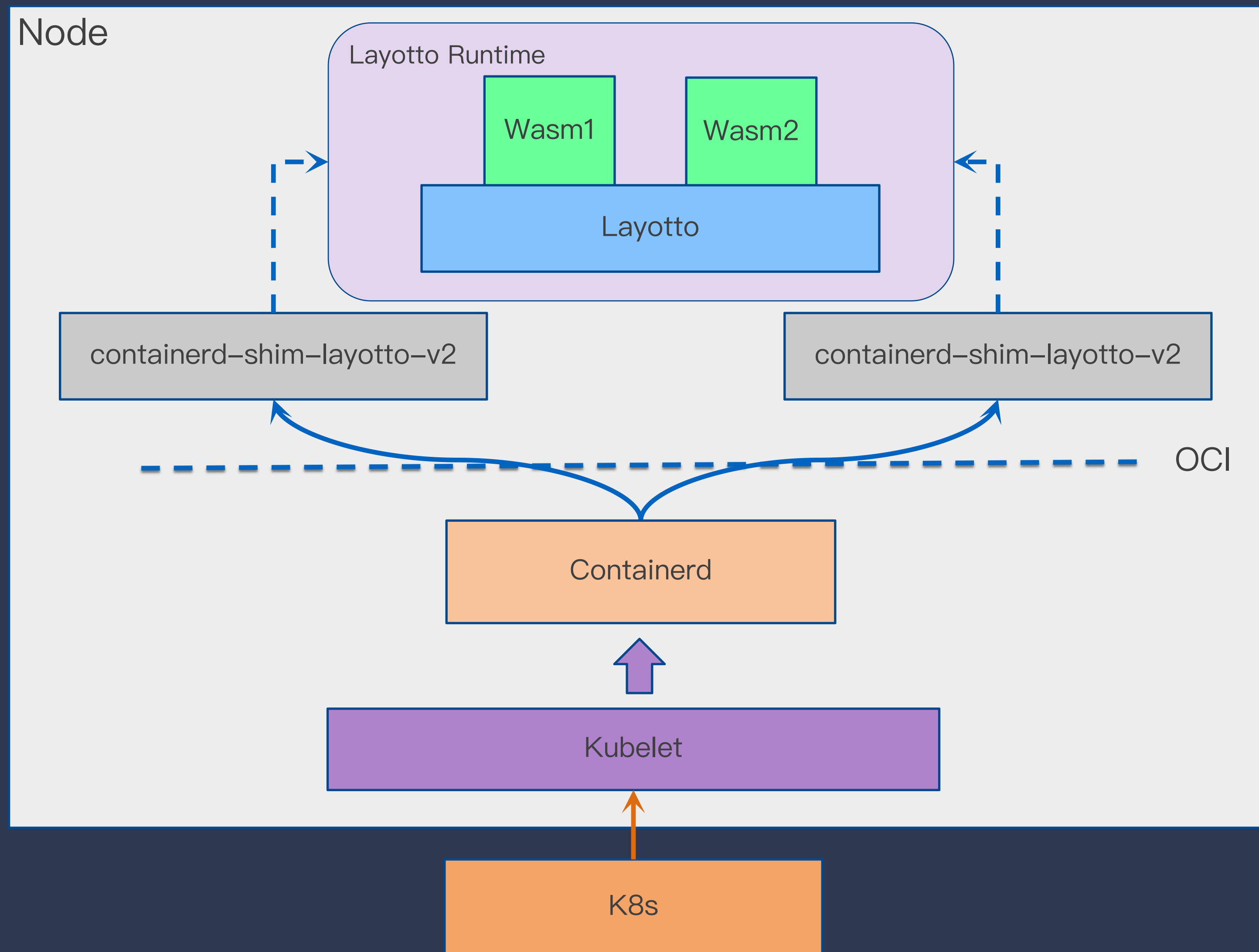
Layotto 与蚂蚁函数化的明天



Layotto 与蚂蚁函数化的明天



Layotto 与蚂蚁函数化的明天



Layotto 与蚂蚁函数化的明天

```
→ containerd cat wasm-1.yaml
apiVersion: v1
kind: Pod
metadata:
  name: wasm-1
spec:
  runtimeClassName: layotto
  containers:
  - name: wasm-1
    image: lingfenglangshao/wasm_1
→ containerd █
```

```
→ containerd kubectl apply -f wasm-1.yaml
pod/wasm-1 created
```

```
→ containerd kubectl get pod
```

NAME	READY	STATUS	RESTARTS	AGE
wasm-1	1/1	Running	0	2m39s
wasm-2	1/1	Running	0	2m22s

```
→ containerd █
```

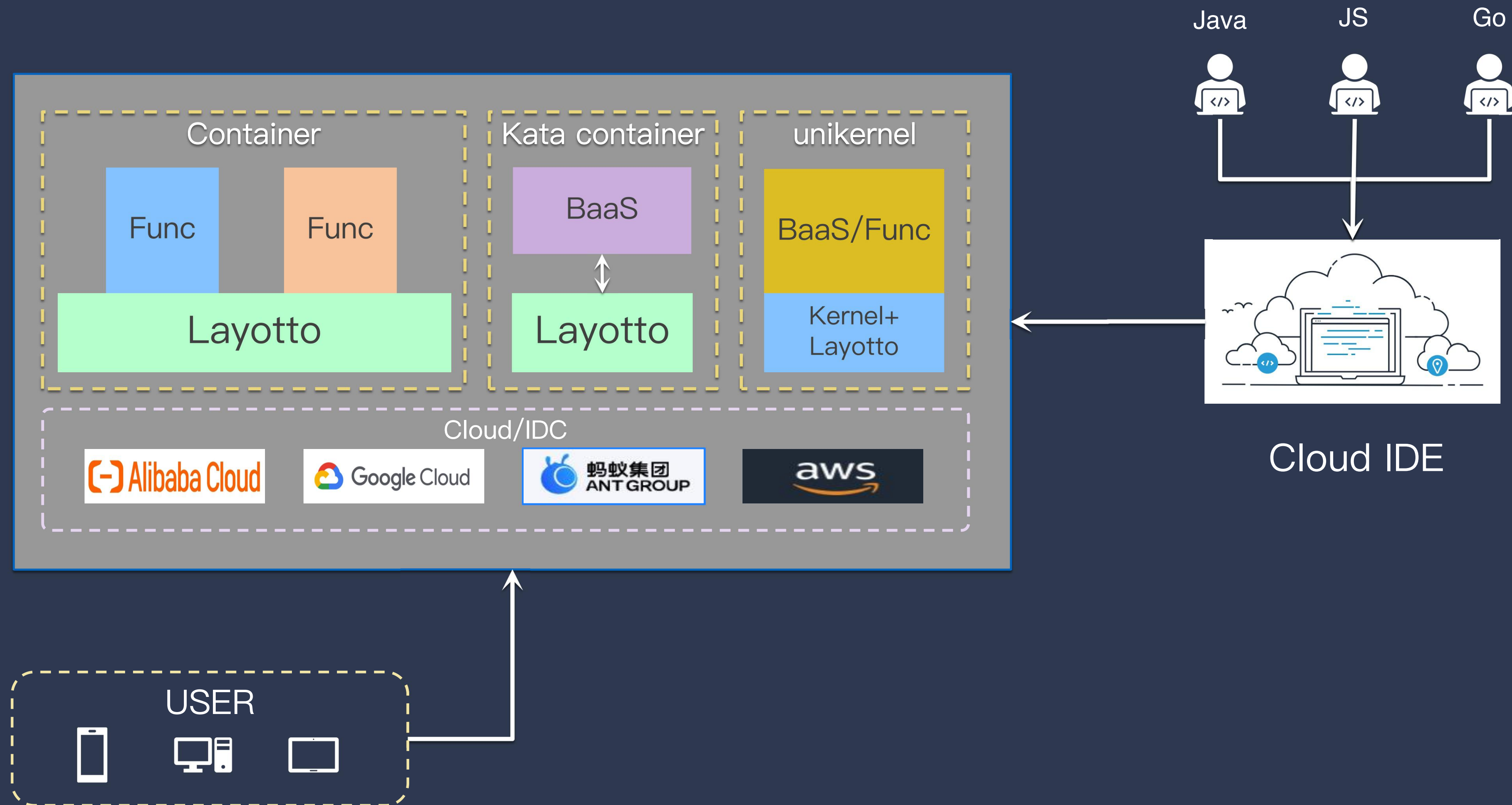
```
→ containerd kubectl delete pod wasm-1
pod "wasm-1" deleted
```

```
→ containerd kubectl get pod
```

NAME	READY	STATUS	RESTARTS	AGE
wasm-2	1/1	Running	0	3m42s

```
→ containerd █
```


Layotto 与蚂蚁函数化的明天



04

开源与共赢

Dapr 社区

dapr / daprPublic

<> Code

Issues182

Pull requests21

Actions

Security

Insights

[Proposal] Distributed Lock API design #3549

Openseeflood opened this issue on 13 Aug · 6 comments

seeflood commented on 13 Aug · edited by yaron2

In what area(s)?

/area runtime

0. tl;dr

dapr / daprPublic

<> Code

Issues182

Pull requests21

Actions

Security

Insights

Are bindings omnipotent? #3722

Openwenxuwan opened this issue 11 days ago · 6 comments

...

Assignees

No one assigned

Labels

None yet

Projects

None yet

dapr / dapr

<> Code

Issues333

Pull requests45

Actions

Security

Insights

[Feature Request] PublishEvent API returns a response with concrete semantics and extensible metadata #3276

OpenRayneHwang opened this issue 3 days ago · 0 comments

RayneHwang commented 3 days ago · edited

In what area(s)?

/area runtime

Assignees

No one assigned

Labels

None yet

dapr / daprPublic

<> Code

Issues182

Pull requests21

Actions

Security

Insights

[Proposal] file API #3702

Openwenxuwan opened this issue 18 days ago · 1 comment

wenxuwan commented 18 days ago · edited

Does dapr plan to increase the API for file operation? It can realize the basic addition, deletion, modification and checking operations of files. The interface looks like the following

// Get file with stream
rpc GetFile(GetFileRequest) returns (stream GetFileResponse) {}

// Put file with stream

Assignees

No one assigned

Labels

None yet

Projects

None yet

dapr / dapr

<> Code

Issues182

Pull requests21

Actions

Security

Insights

[Proposal] configuration api design #2988

Openskyao opened this issue on 29 Mar · 21 comments

skyao commented on 29 Mar · edited

Note: this proposal has been updated (as v0.2) after the review and discussion on the first version(as v0.1).

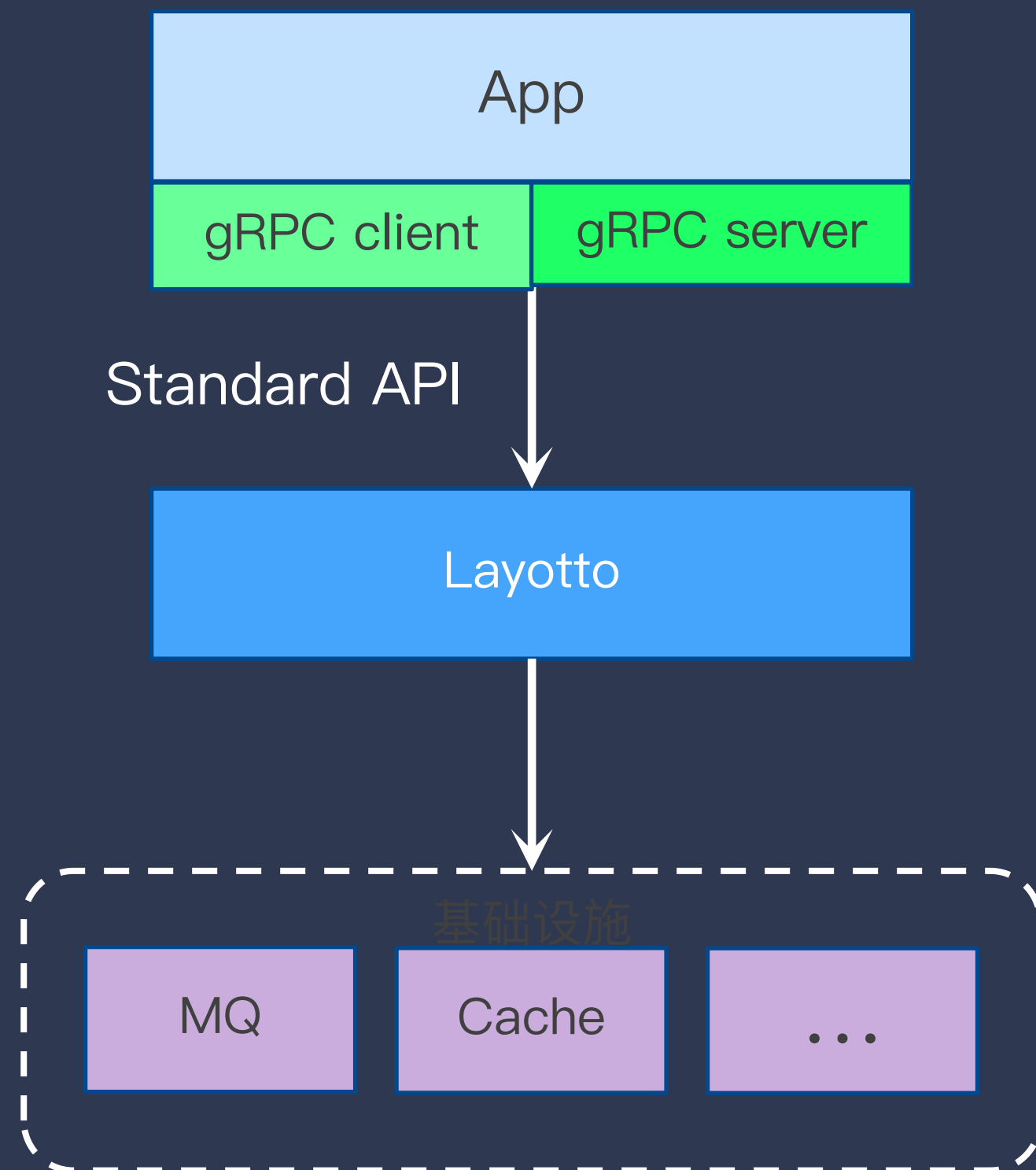
Member

WebAssembly 社区

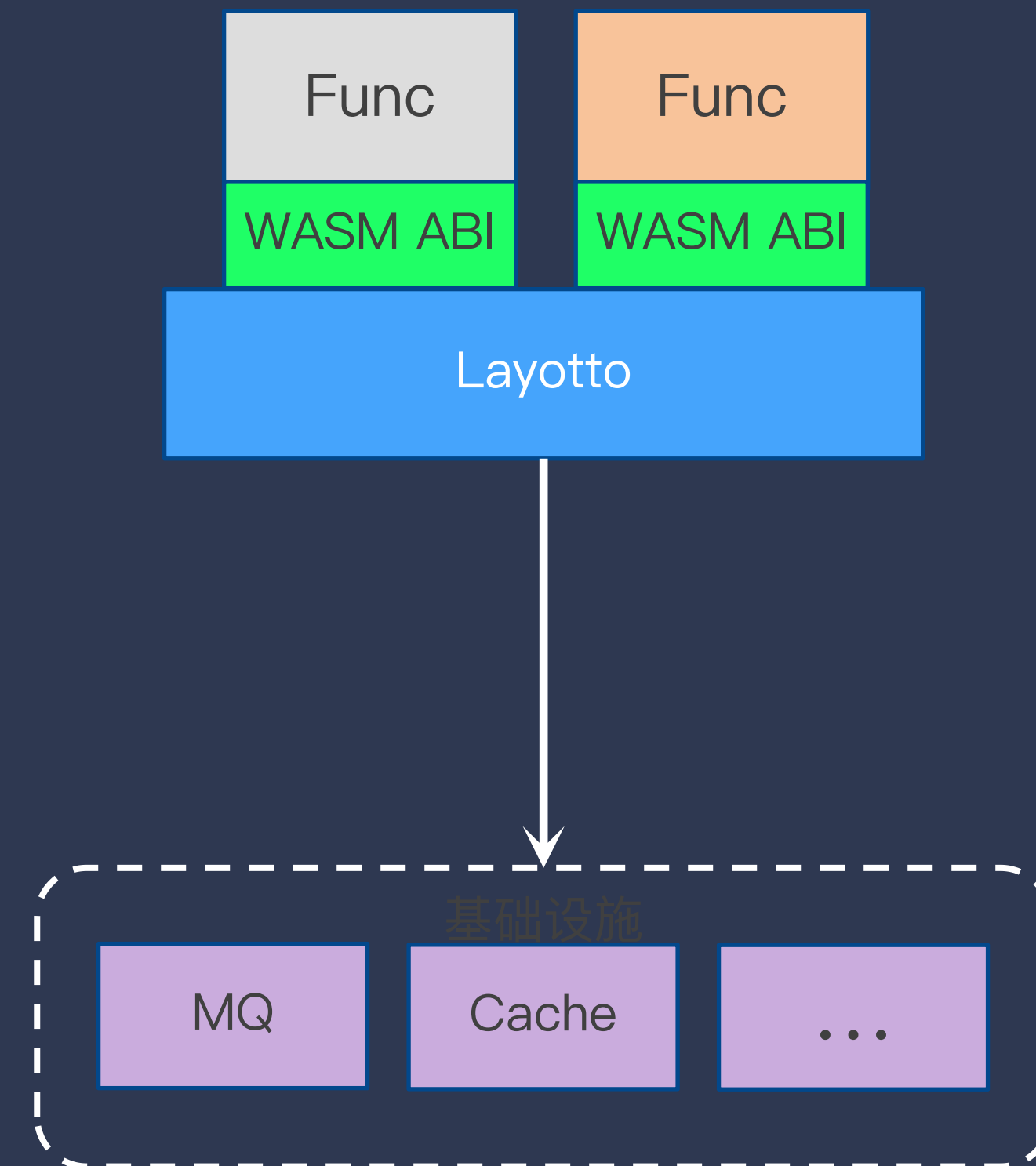
- 多语言支持 (Java, Go, JS)
- Wasm ABI (proxy-wasm/spec)
- 生态建设 (Troubleshooting, 资源限制, 高级特性)

Layotto 社区

Runtime API



FaaS



DIVE

全球基础软件创新大会



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大 / 会 / 官 / 网



(排名不分先后)

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THANKS

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SOFTWARE IS CHANGING THE WORLD

QCon