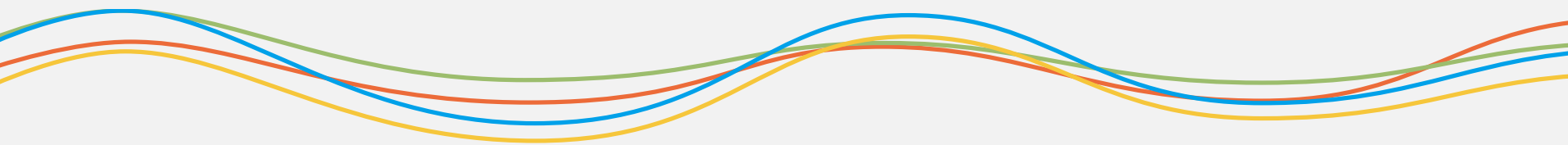


面向云原生的服务架构

架构部 张亮



技术发展趋势



- 软件改变世界
- 开源改变软件
- 云吞噬开源

云原生是一种模式



- 可用性 & 伸缩性
- 自动化部署 & 管理
- 效率提升
- 随处运行

云原生架构分层

Application Definition & Development

Orchestration & Management

Runtime

Provisioning

infrastructure

- 数据库 & 数据仓库
- 流式处理
- 开发语言 & 框架
- 代码管理 & 镜像仓库 & 打包部署
- 持续集成 / 持续交付

- 调度 & 编排
- 分布式协调 & 服务发现
- 服务治理
- 可视化 & 分析

Runtime



- 存储
- 容器
- 网络

Provisioning



- 宿主机安装 & 管理
- 镜像安全



Application Definition & Development

Databases	Data Warehouse	Streaming	Languages & Frameworks	SCM	Registry Services	Application Definition	CI / CD	Services as Code	API management

Orchestration & Management

Scheduling & Orchestration	Coordination & Service Discovery	Service Management

Runtime

OS	Cloud-Native Storage	Container Runtime	Cloud-Native Network

Provisioning

Infrastructure Automation	Host Management / Tooling	Secure Images

Infrastructure

Platforms

Paas / Container Service

Monitoring & Analysis

Monitoring

Logging

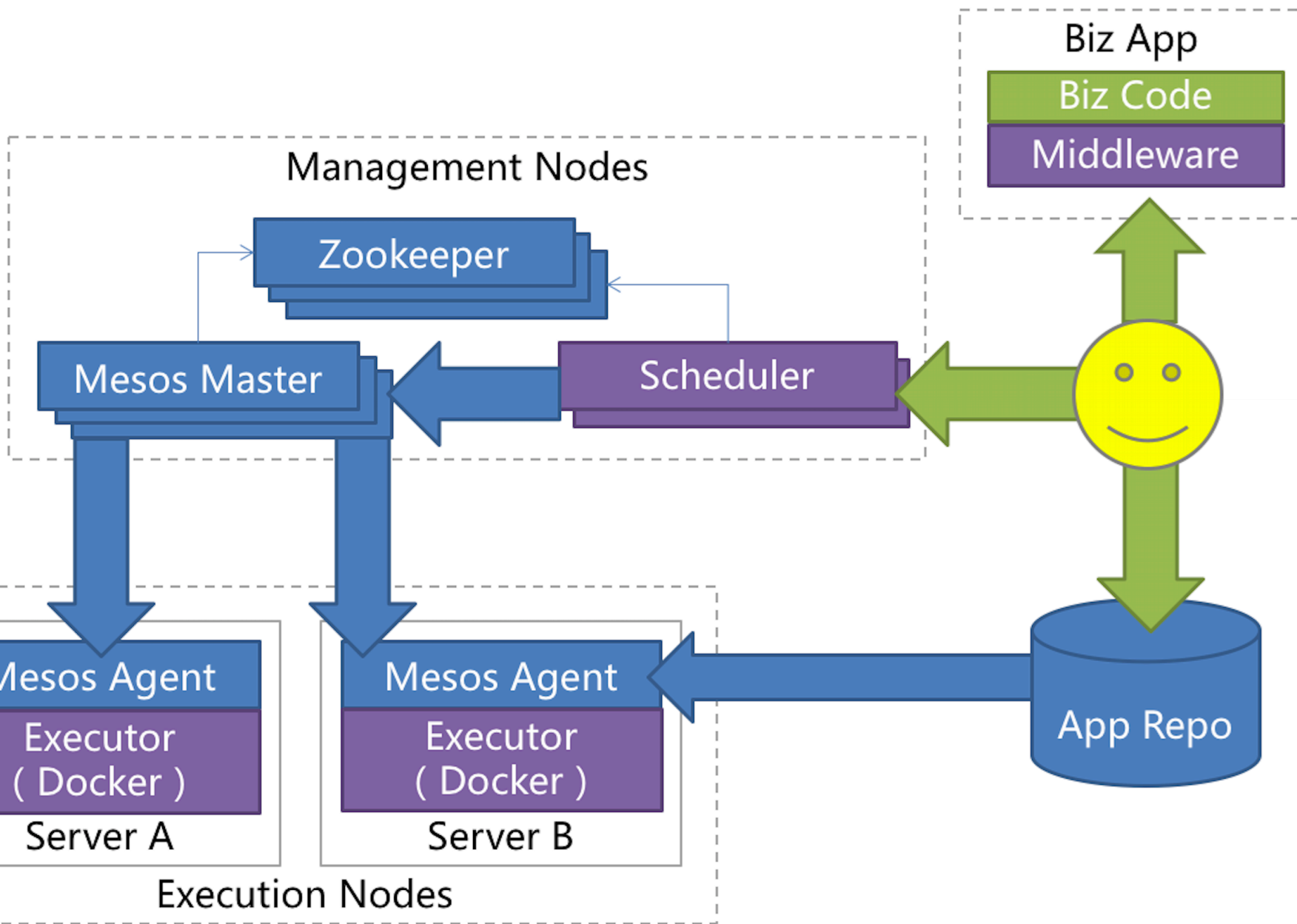
Event-based compute

Tracing

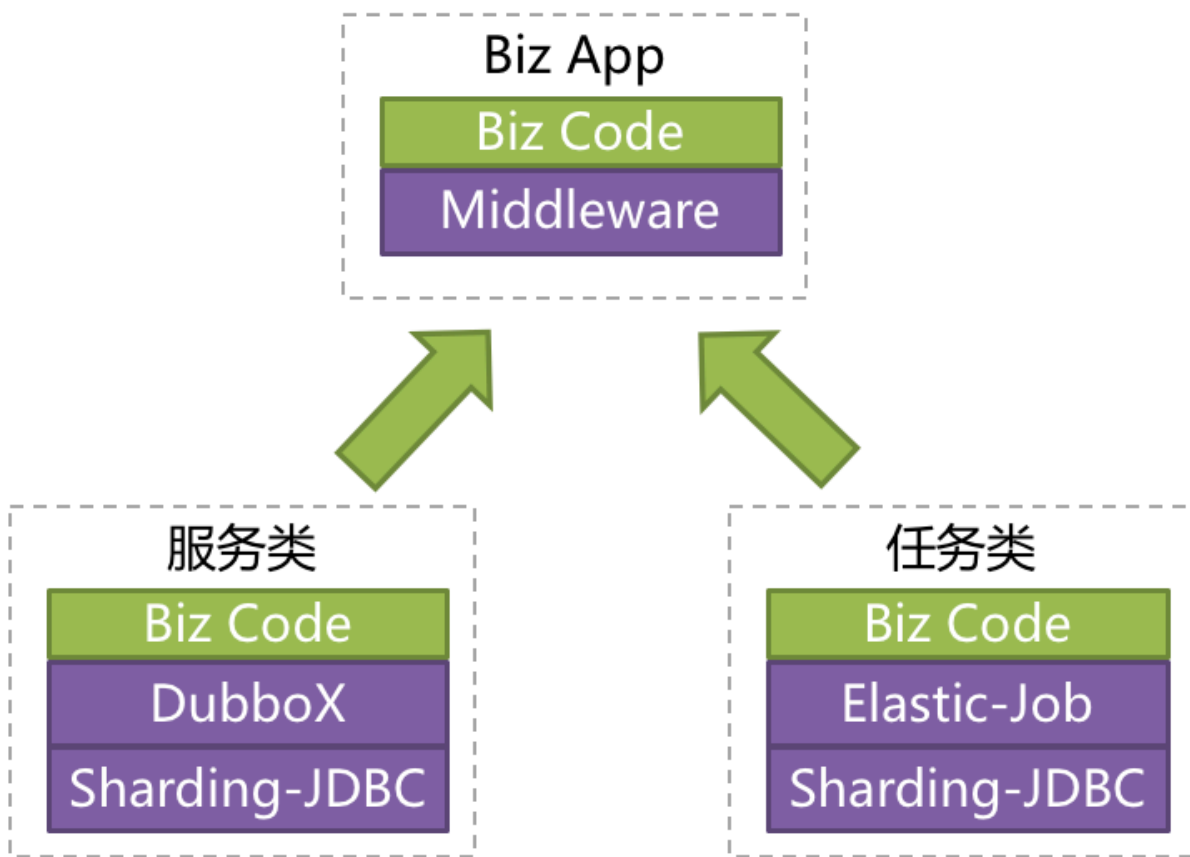
CNCF Projects

github.com/cncf/landscape

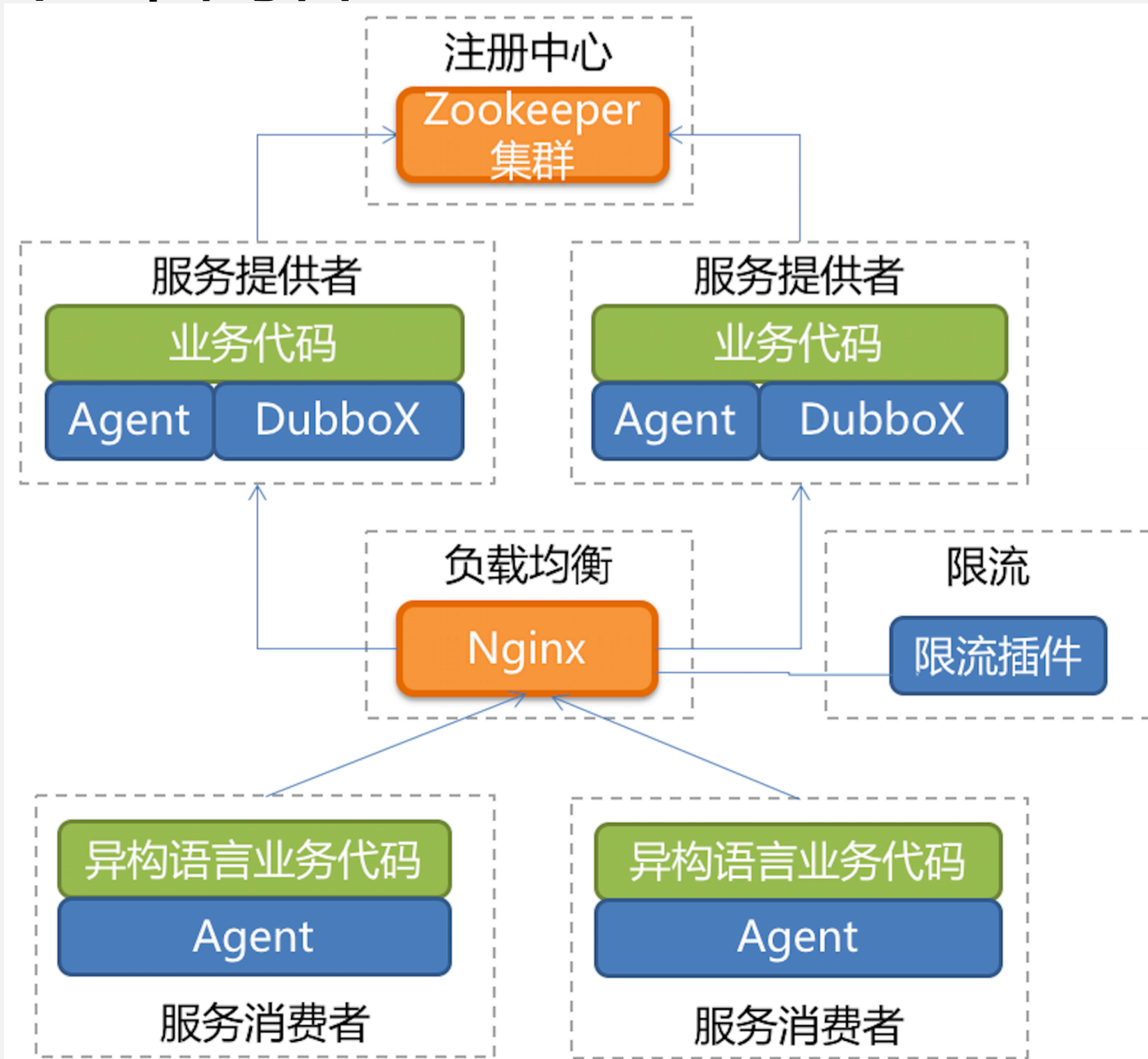
当多云原生方案



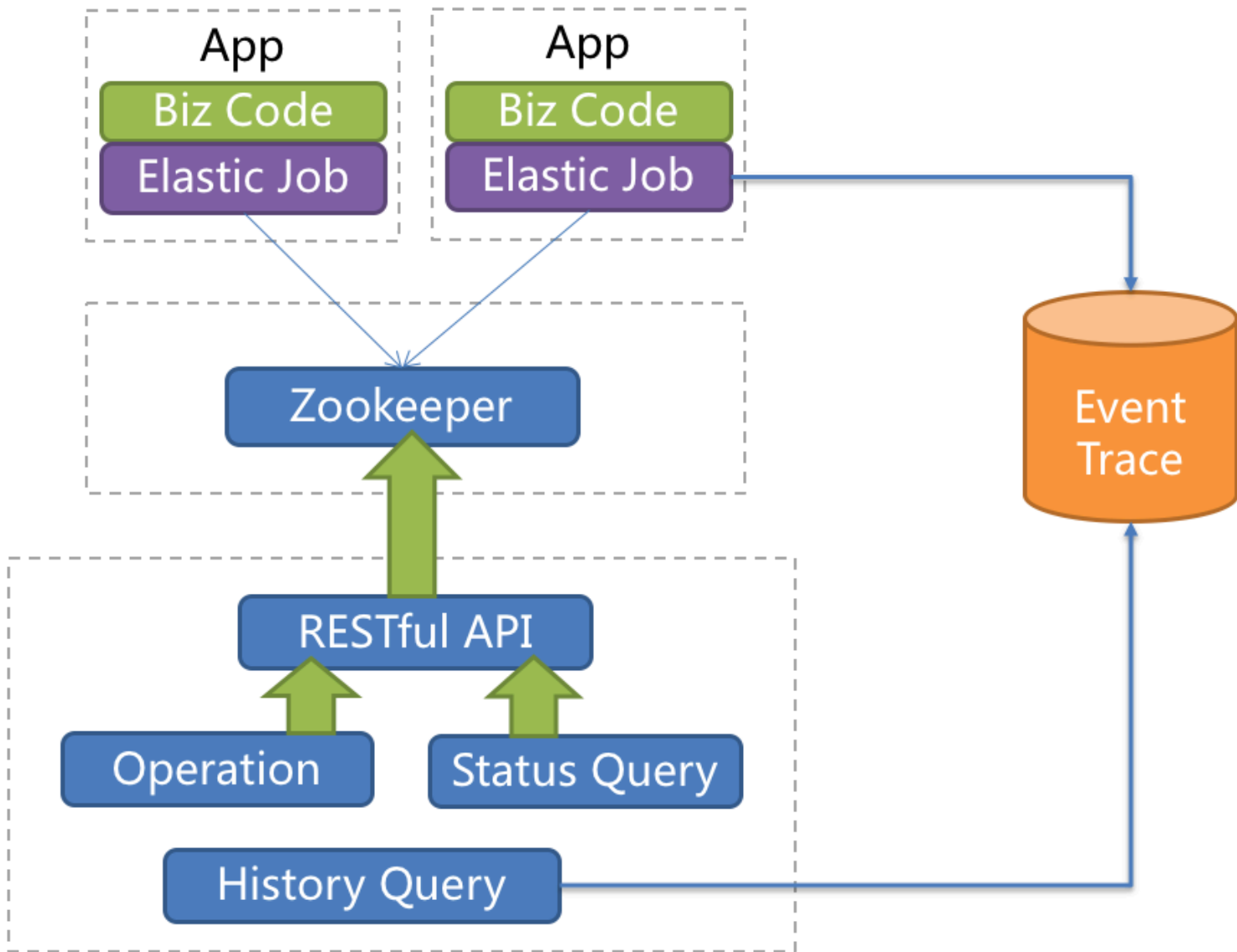
当云原生应用的开发框架



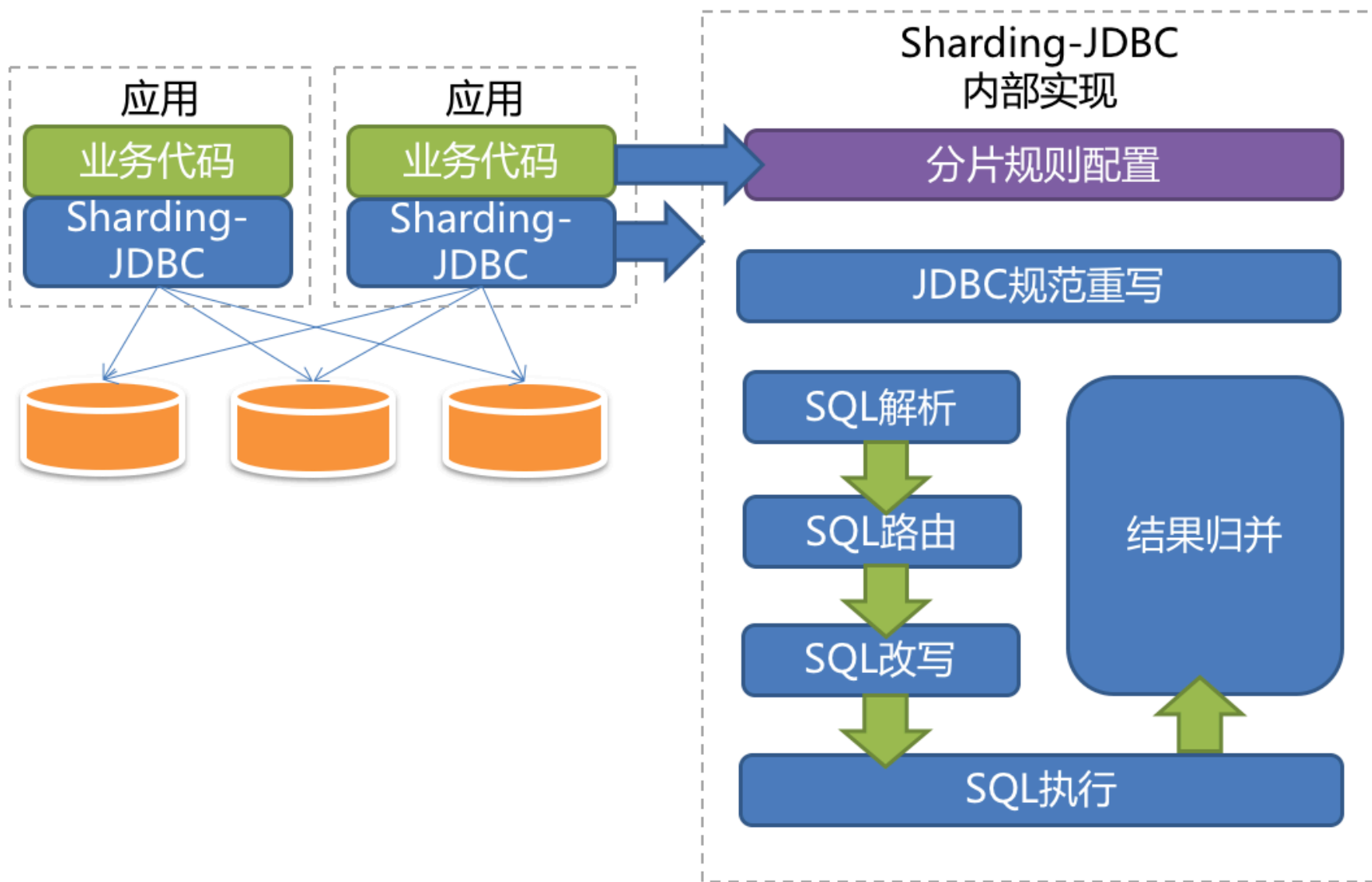
服务化中间件



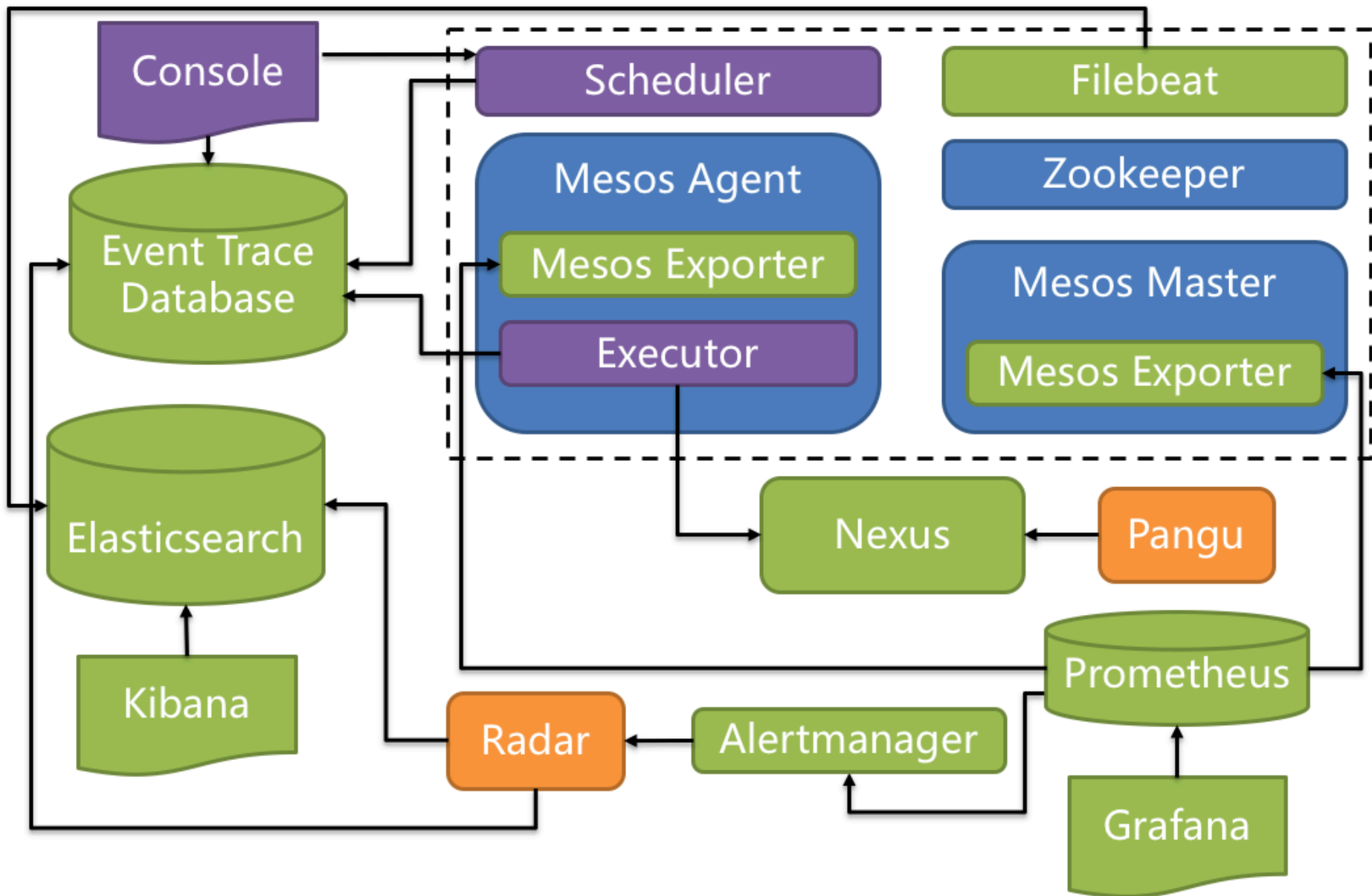
分布式作业中间件



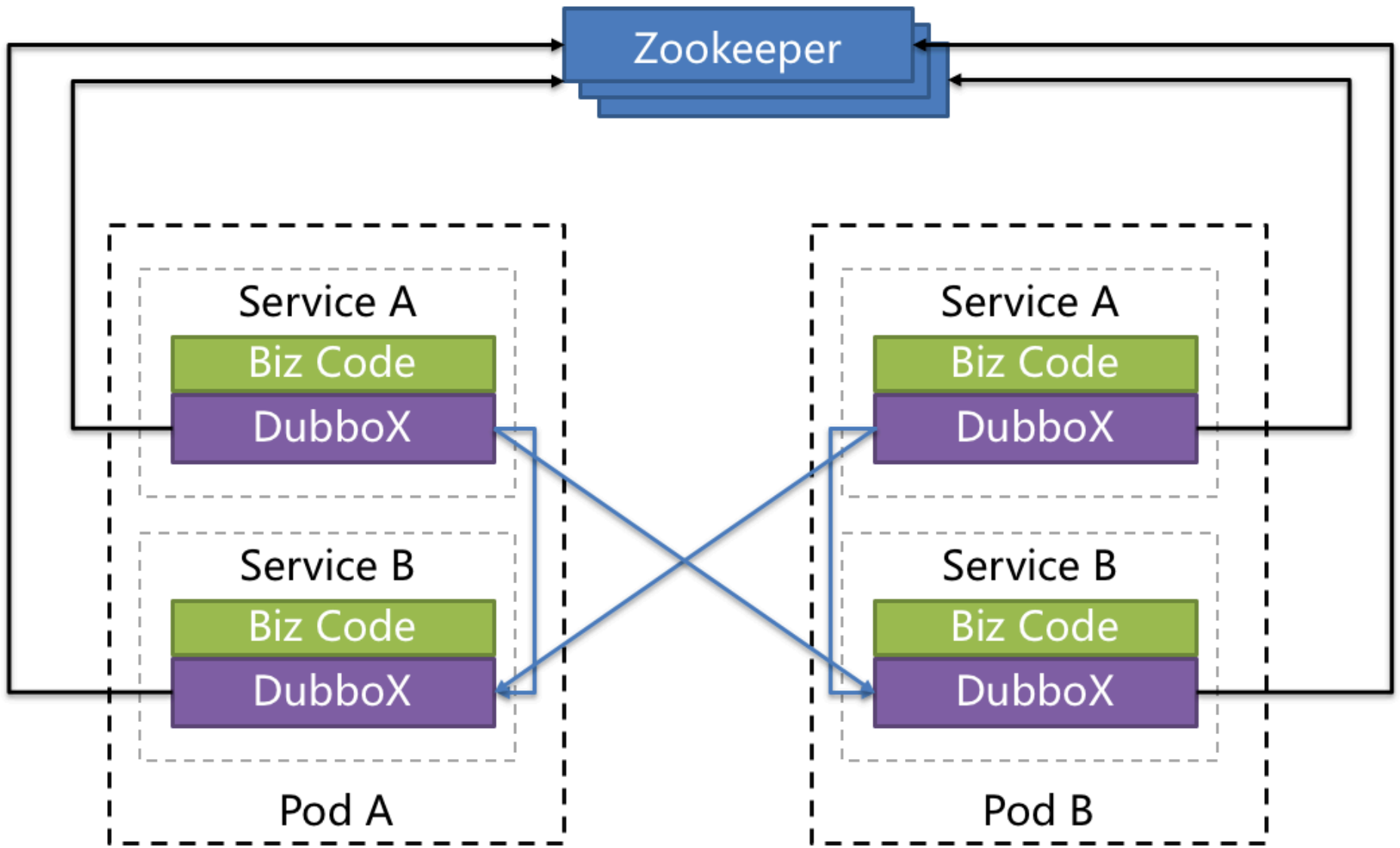
数据库访问层中间件



云化整体架构



Sidecar



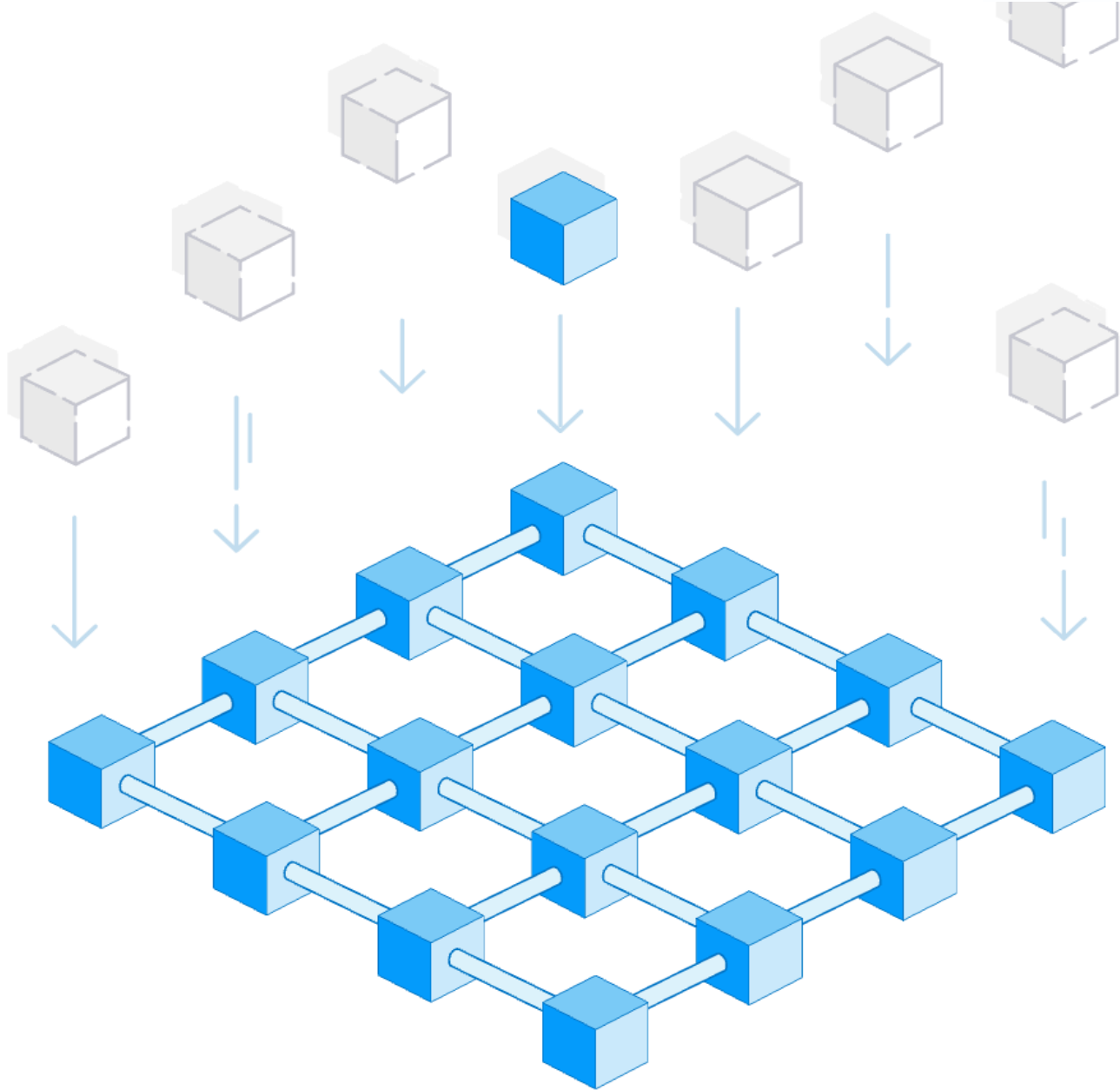
云原生的趋势 – 微服务



- 单一服务拆分为多服务
- 单一实例扩展为多实例
- 成千上万的服务实例

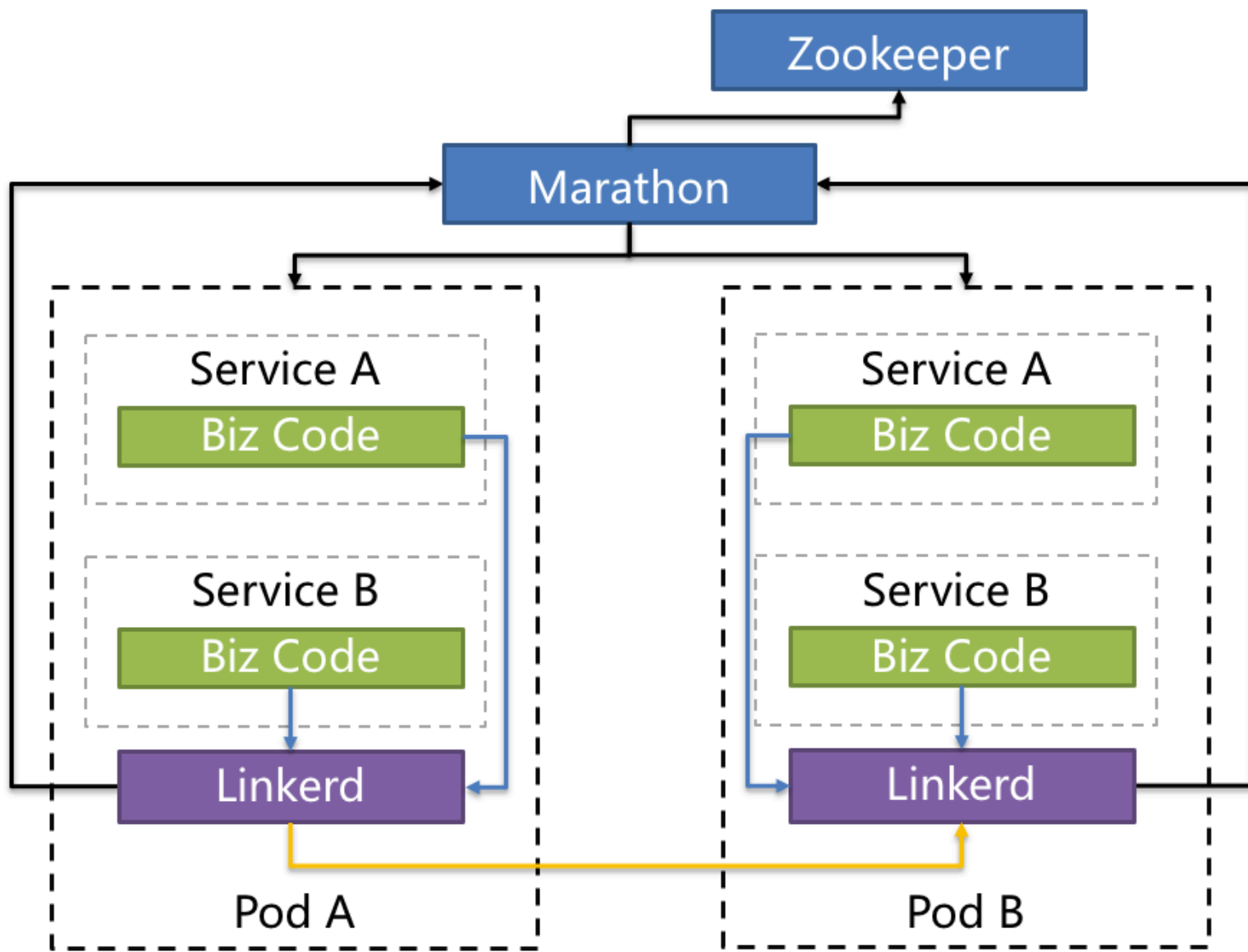
Sidecar缺点

- 服务实例与服务治理强耦合
- 框架代码部署冗余
- 调用链路复杂



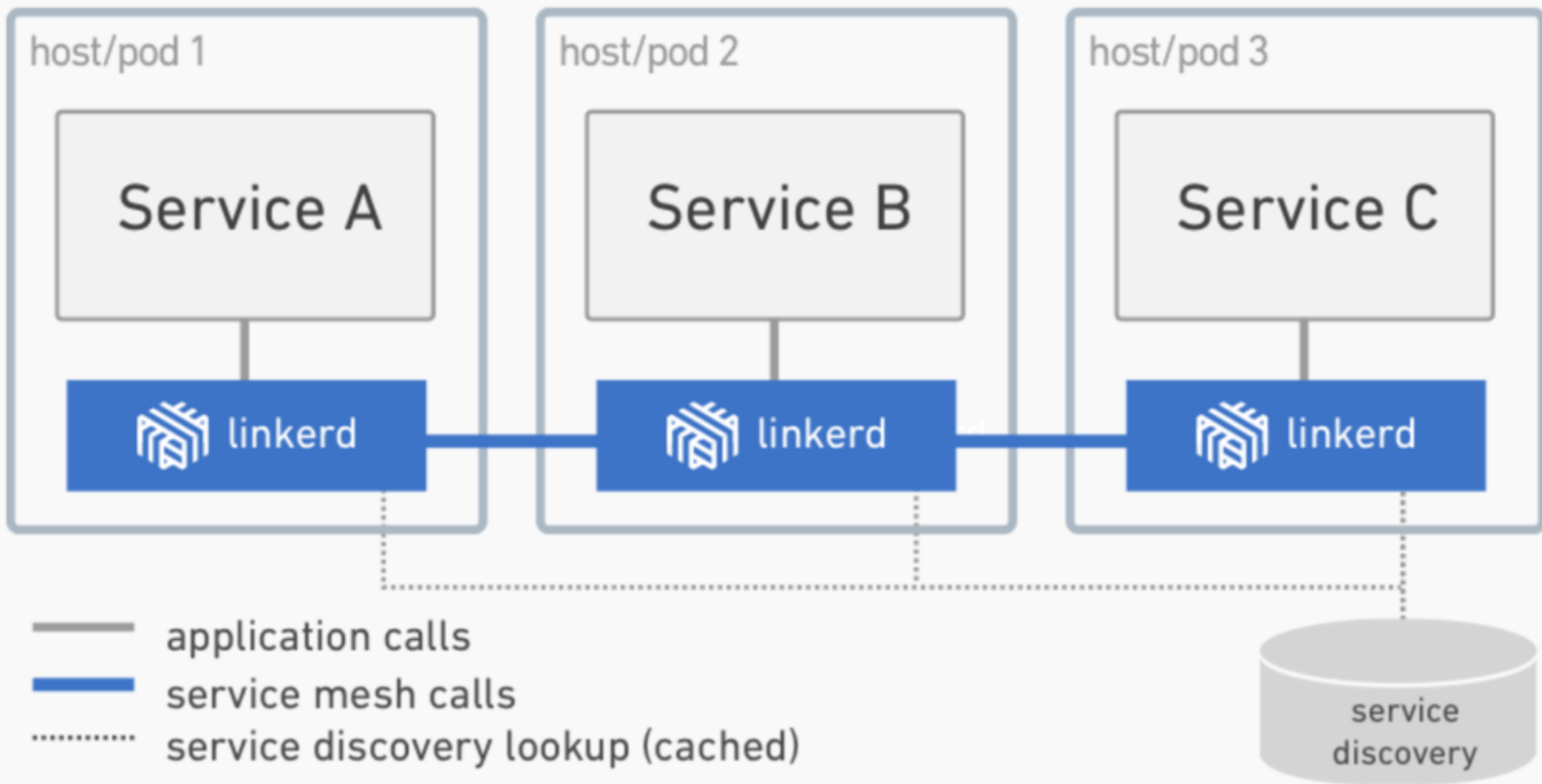
- 服务实例与服务治理解耦
- 业务代码与框架部署解耦
- 简化调用链路

基于Linkerd的Service Mesh





Linkerd instances form a service mesh, allowing application code to communicate reliably.



当多云原生技术栈



Application Definition & Development

DubboX

Elastic-Job

Sharding-JDBC

Spring

GitLab

Jenkins

Orchestration & Management

Kubernetes

Mesos

Zookeeper

Linkerd

Prometheus

ELK

Runtime

Docker

Provisioning

Ansible

开源



<https://github.com/dangdangdotcom/elastic-job>

截止目前 stars **2376** , 目前已明确采用的公司**30+**家

<https://github.com/dangdangdotcom/sharding-jdbc>

截止目前 stars **2286**

<https://github.com/dangdangdotcom/dubbo>

截止目前 stars **3750**

THANK YOU

