

构建微服务云原生应用

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扫码试看/订阅

《Spring Boot & Kubernetes 云原生微服务实践》

CHAPTER

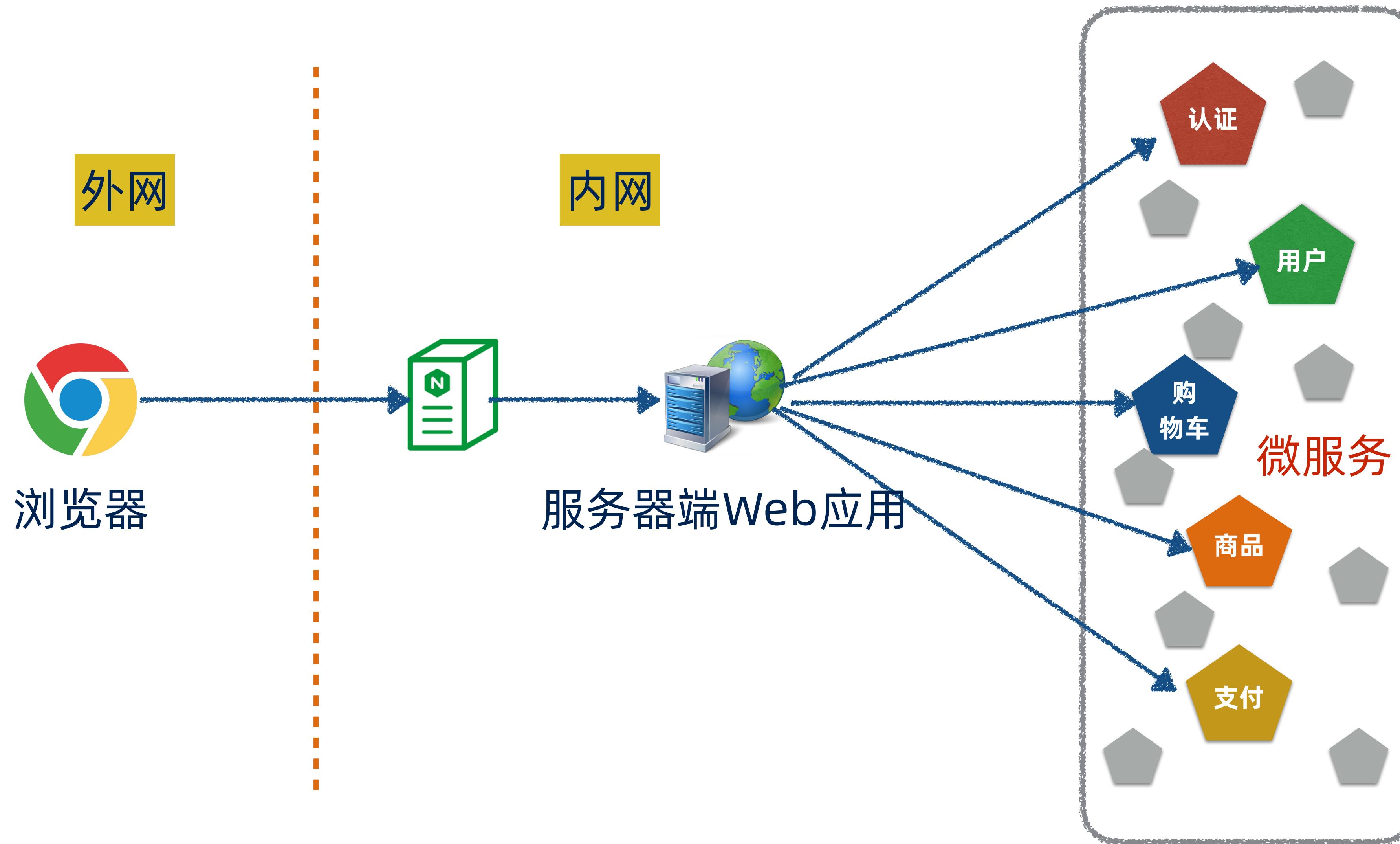
04

可编程网关设计和实践

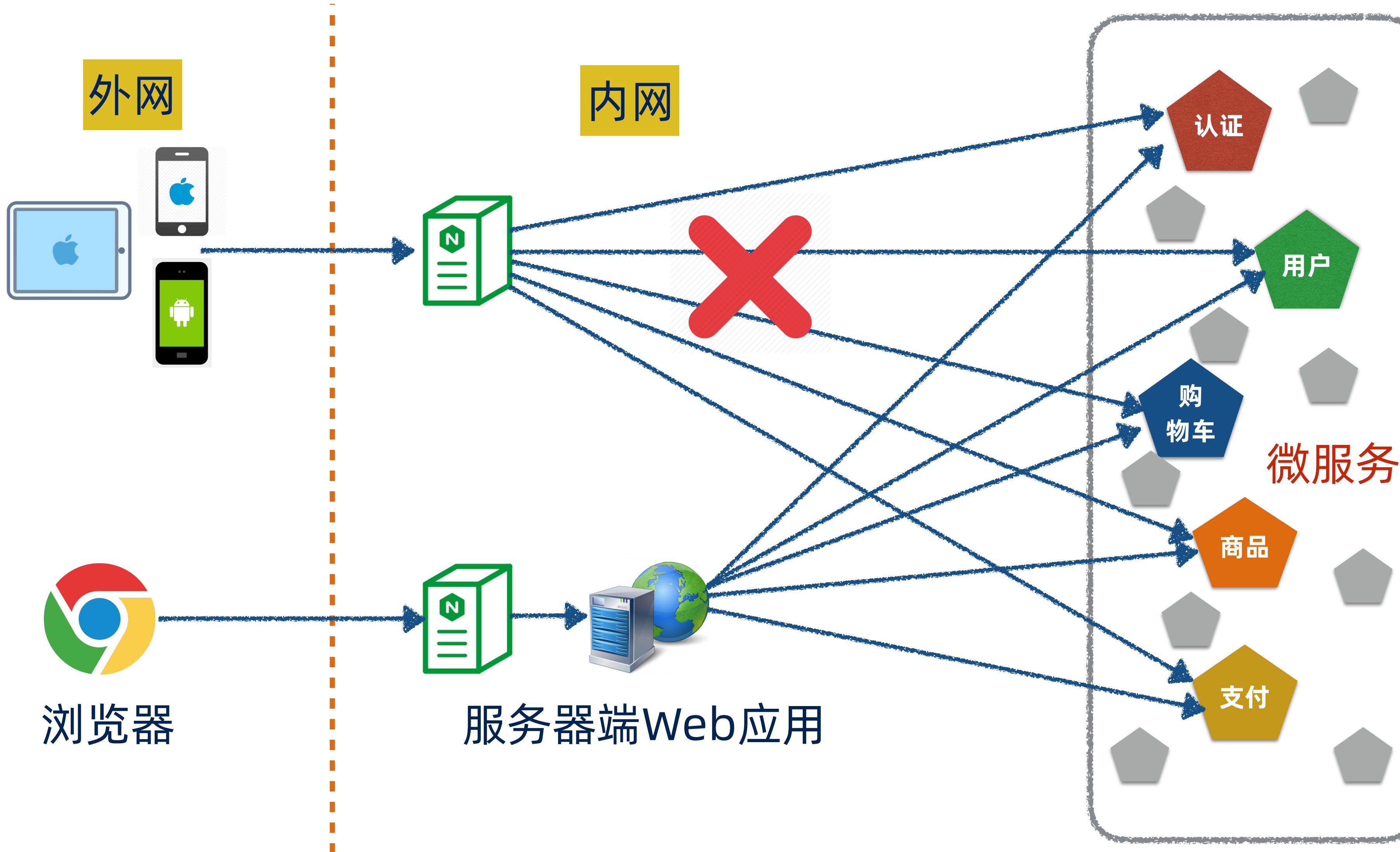
第 1 部分

网关和 BFF 是如何演化出来的(上)

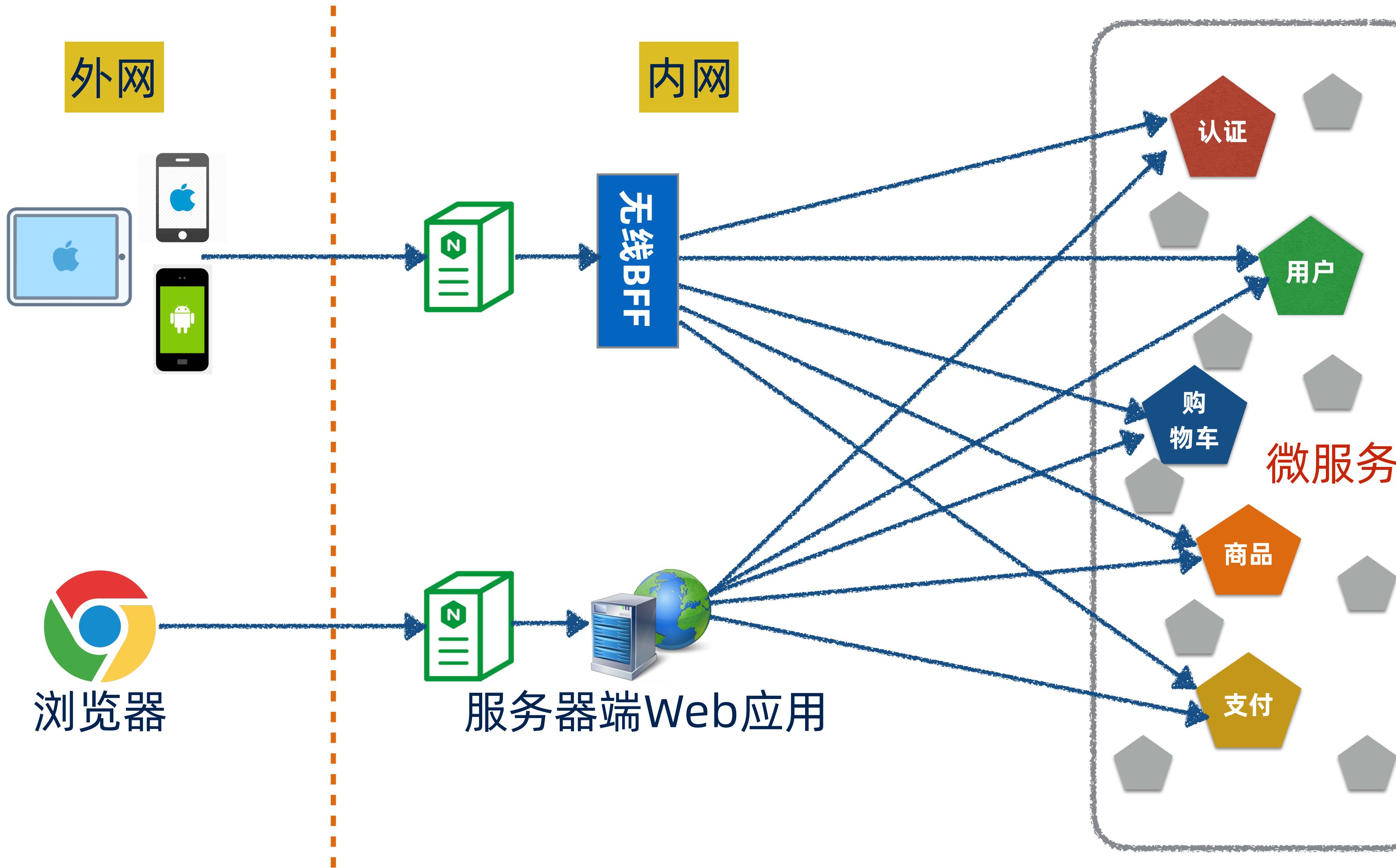
MyShop SOA V1



MyShop SOA V2



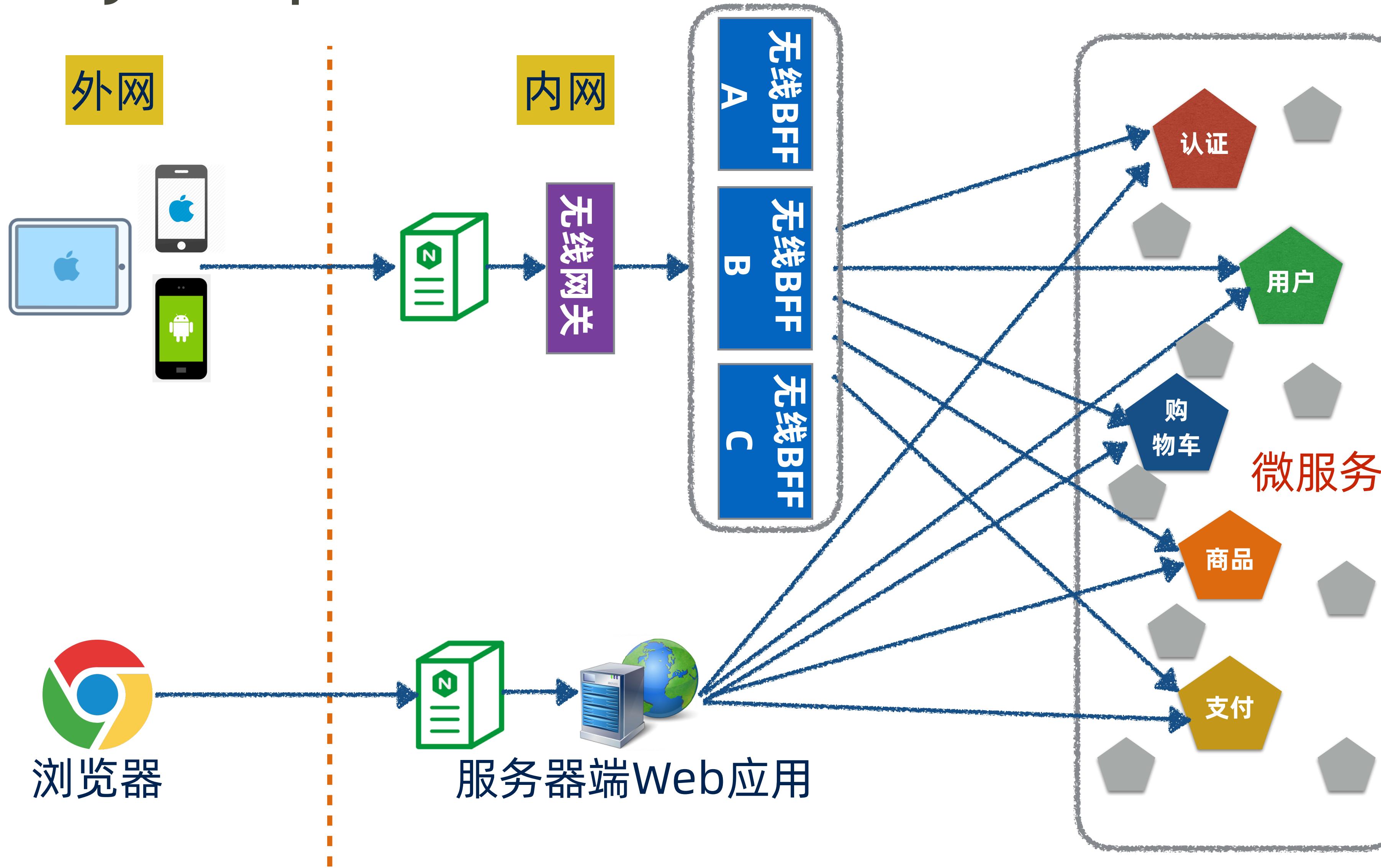
MyShop SOA V2.5



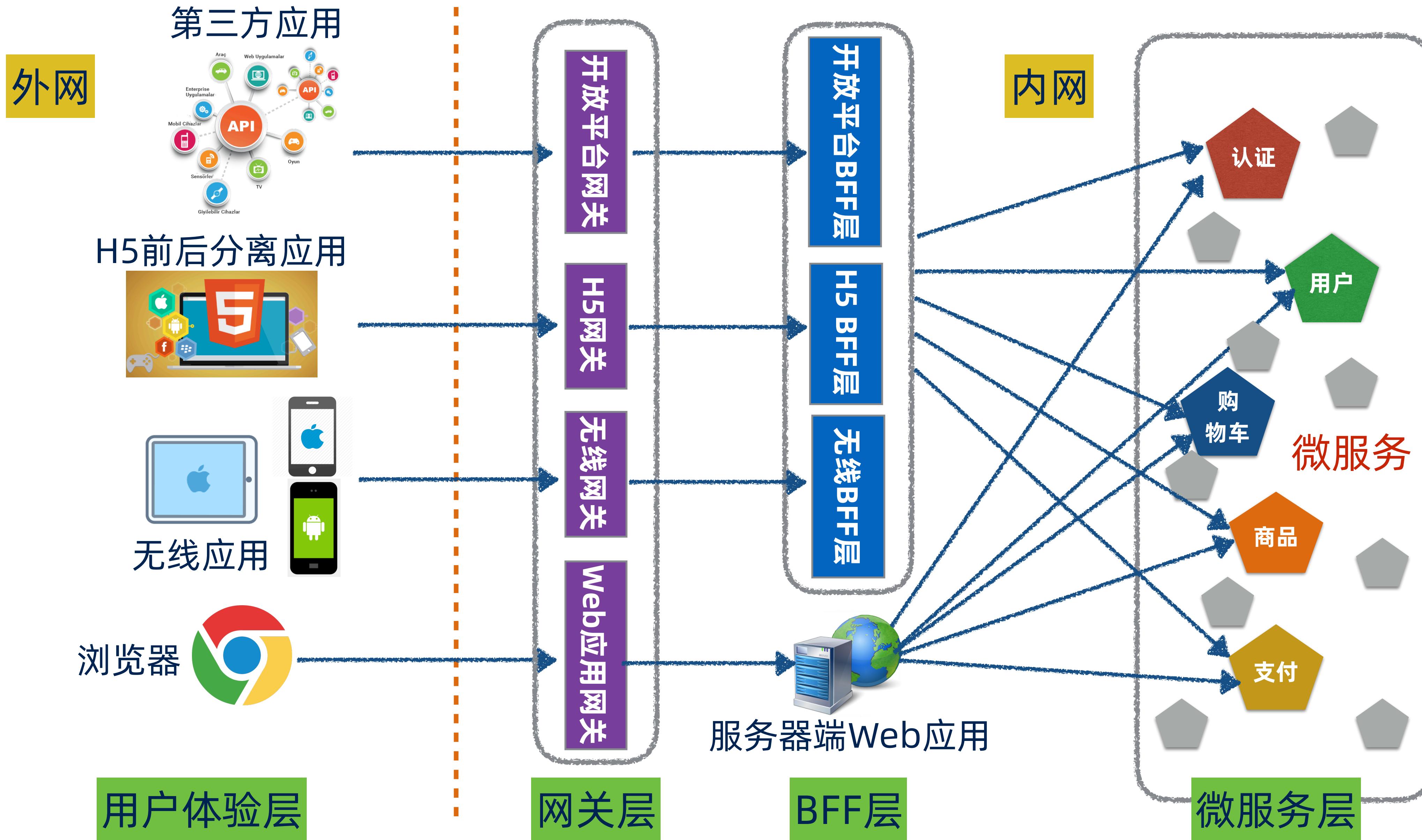
第 2 部分

网关和 BFF 是如何演化出来的(下)

MyShop SOA V3



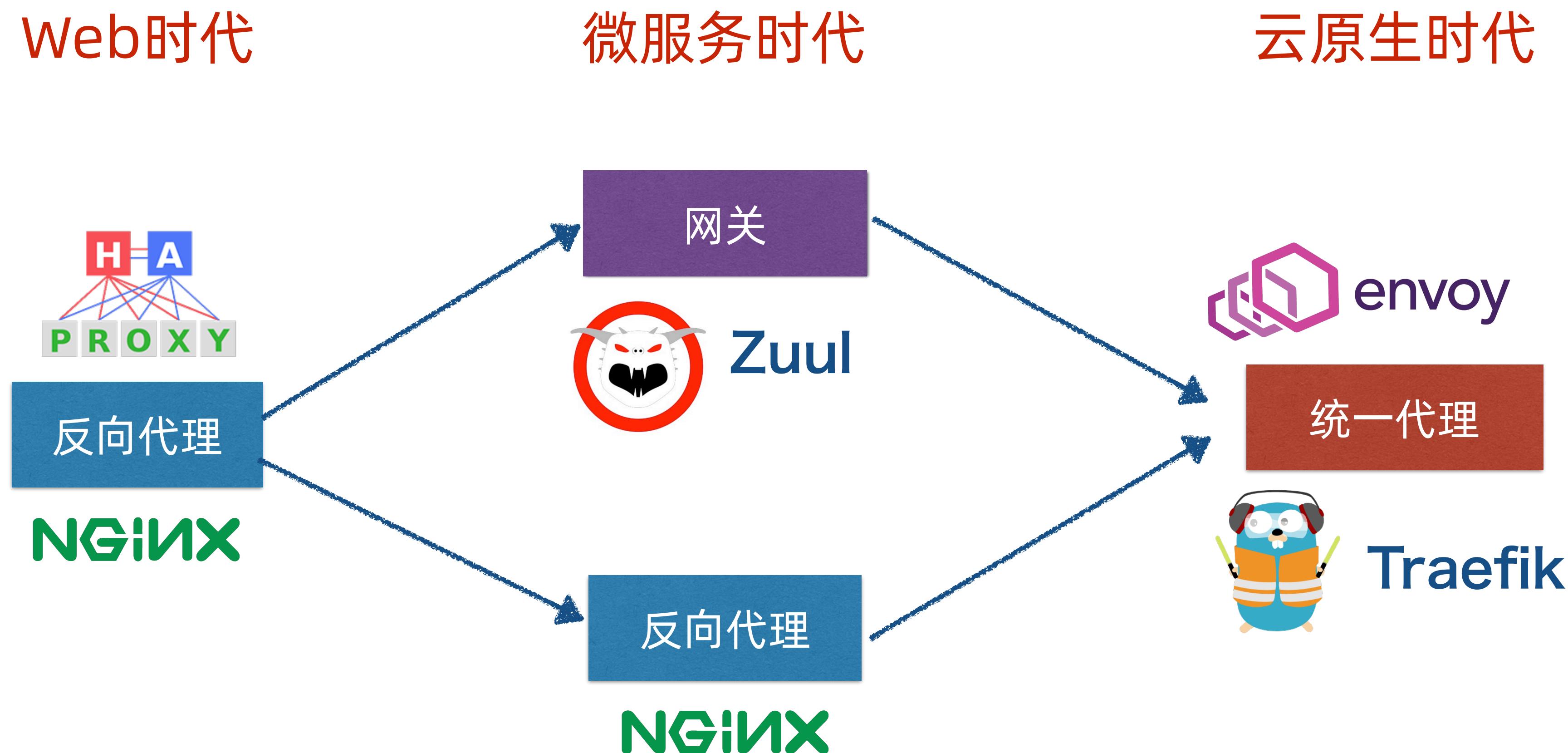
MyShop SOA V4



第 3 部分

网关和反向代理是什么关系？

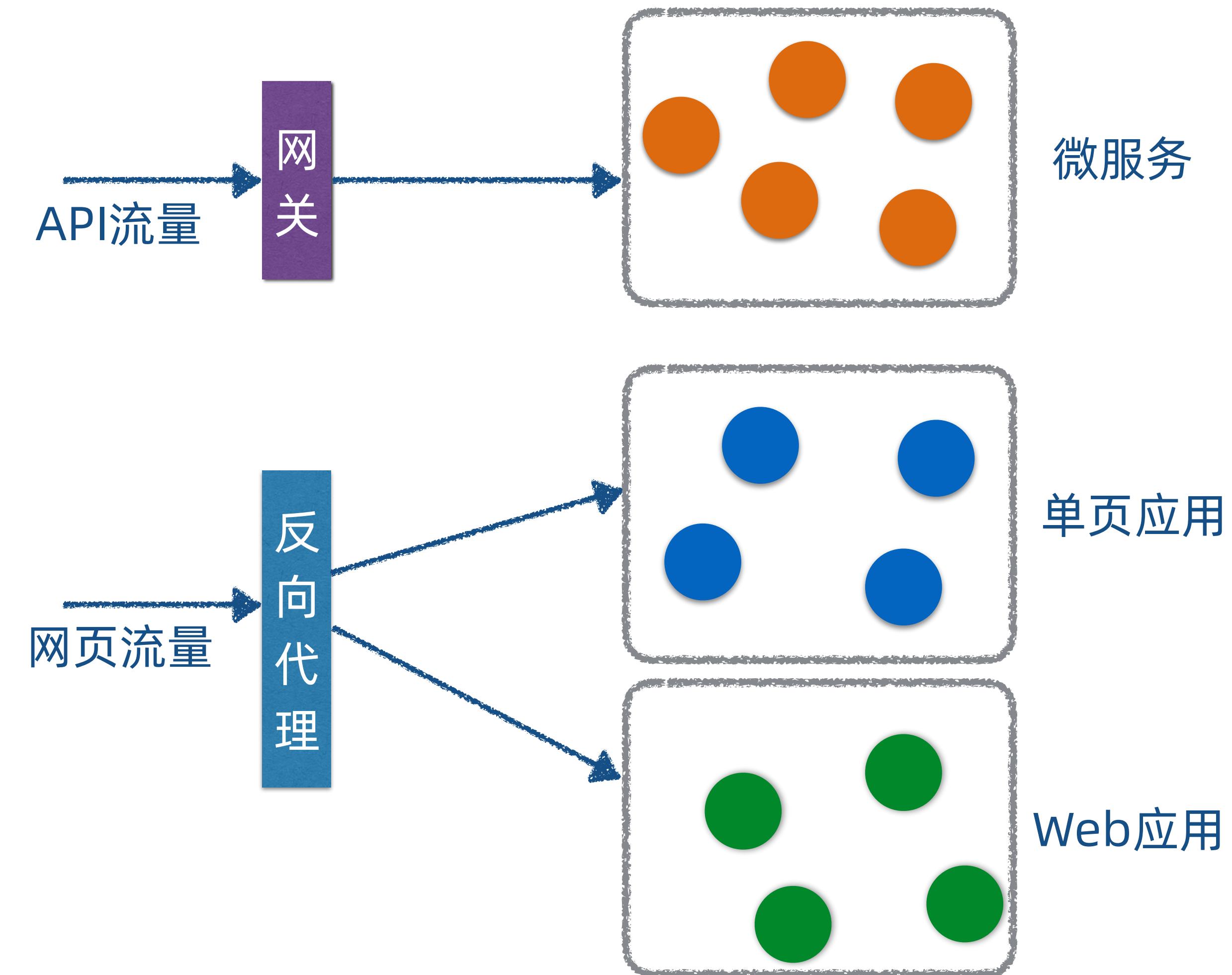
反向代理 vs 网关



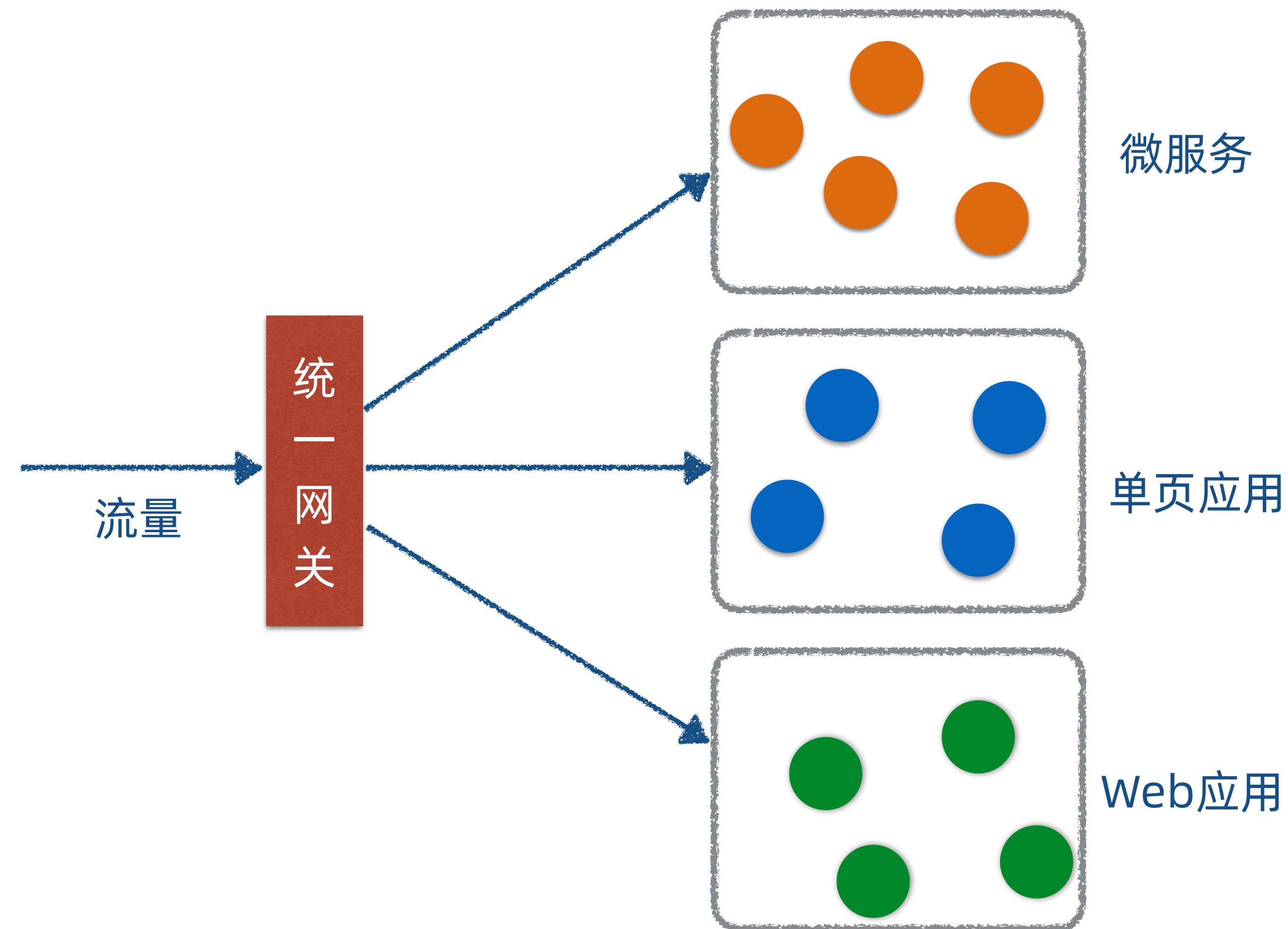
第 4 部分

网关需要分集群部署吗？

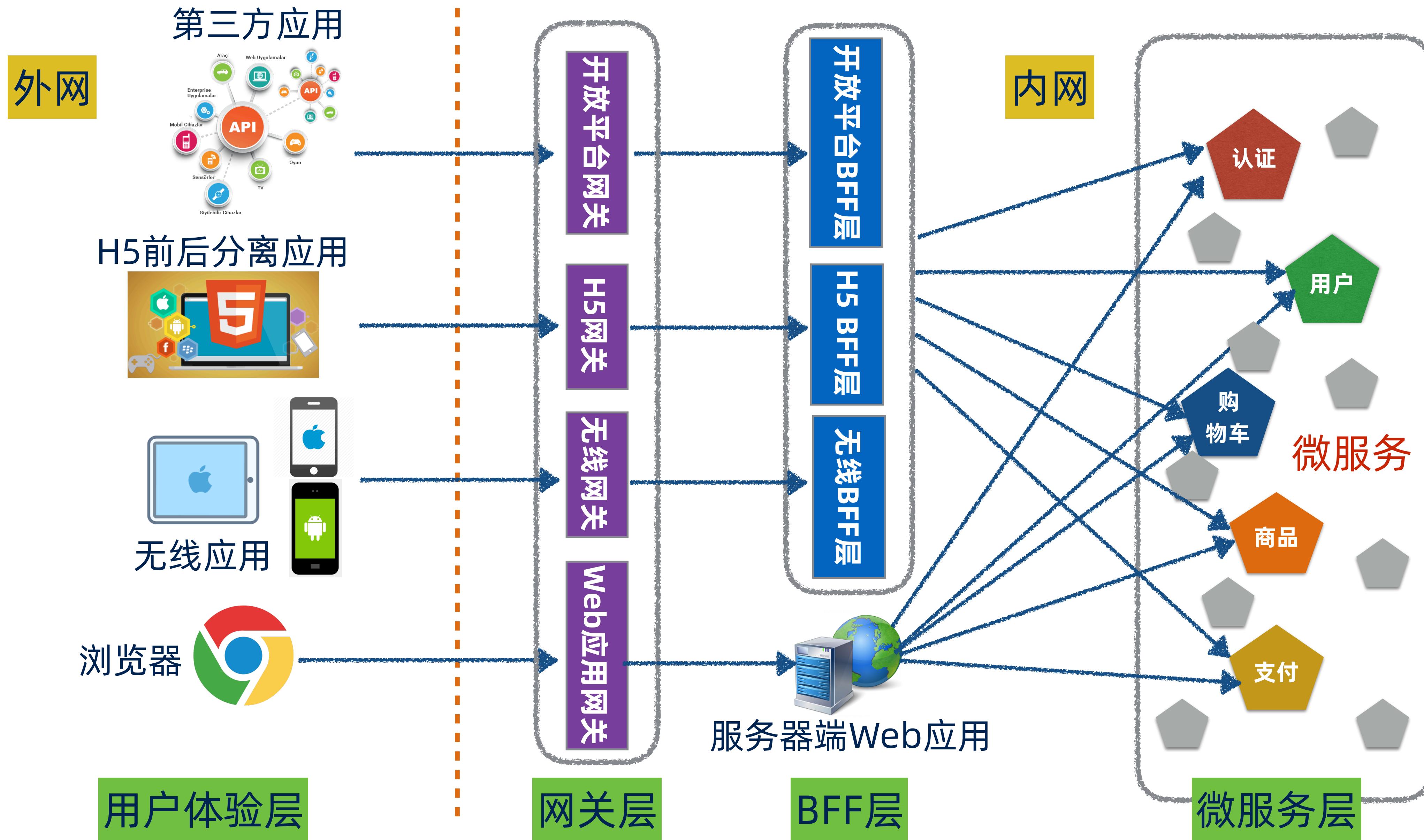
反向代理+网关部署架构



统一网关部署架构



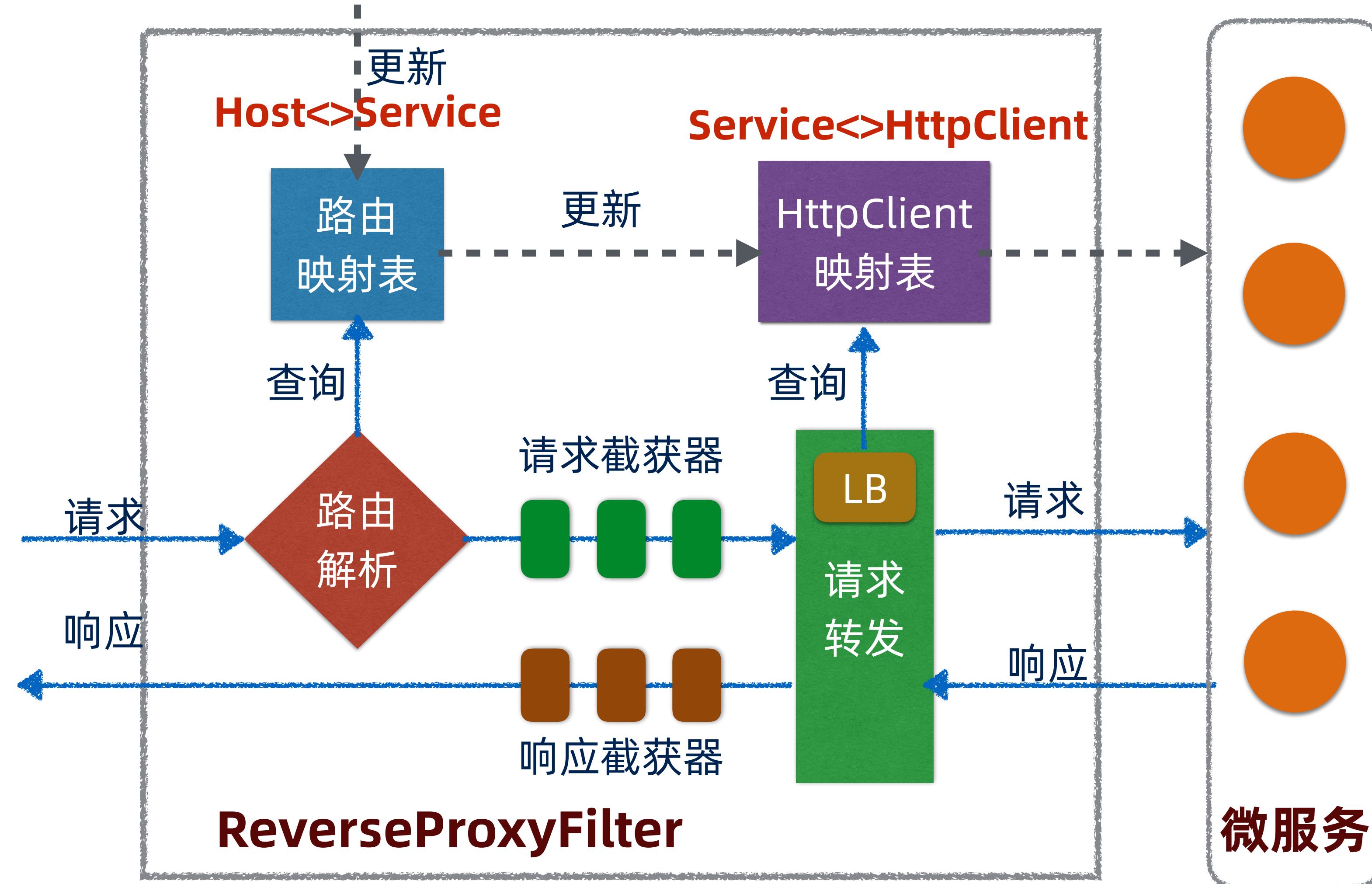
统一网关+分集群



第 5 部分

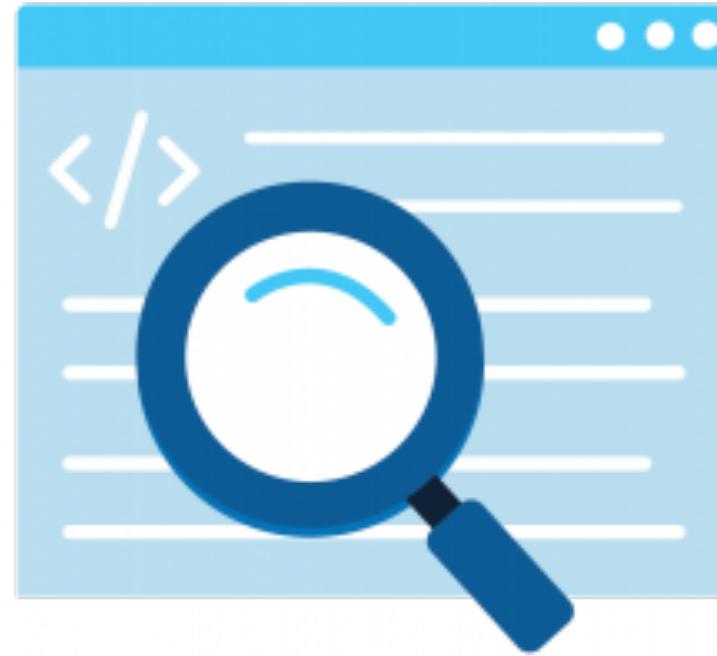
Faraday 网关内核设计

Faraday 网关内核设计



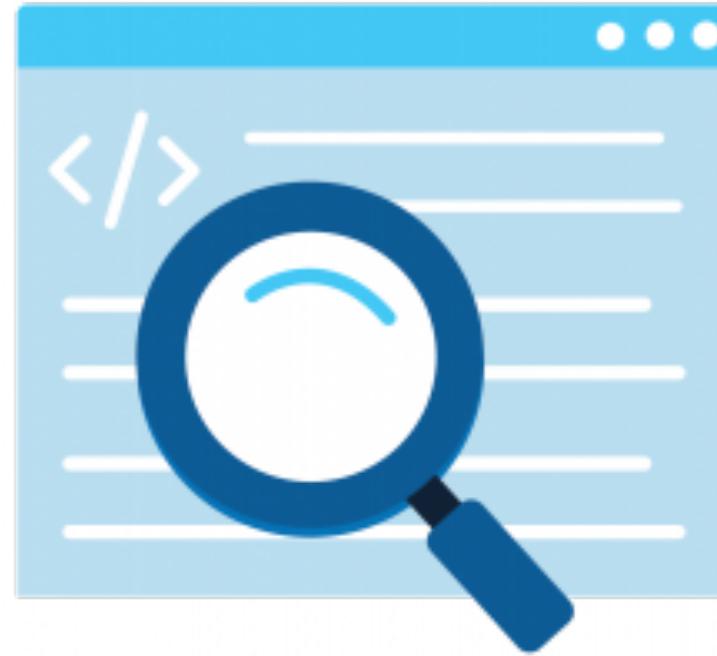
静态路由配置

```
faraday:  
  enable_programmatic_mapping: false  
  tracing:  
    enabled: false  
  mappings:  
    -  
      name: faraday_route  
      host: faraday.staffjoy-v2.local  
      destinations: httpbin.org  
    -  
      name: account_route  
      host: account.staffjoy-v2.local  
      destinations: localhost:8081  
    -  
      name: company_route  
      host: company.staffjoy-v2.local  
      destinations: localhost:8082  
    -  
      name: ical_route  
      host: ical.staffjoy-v2.local  
      destinations: localhost:8083  
    -  
      name: whoami_route  
      host: whoami.staffjoy-v2.local  
      destinations: localhost:8084  
      timeout:  
        connect: 10000  
        read: 10000
```



第 6 部分

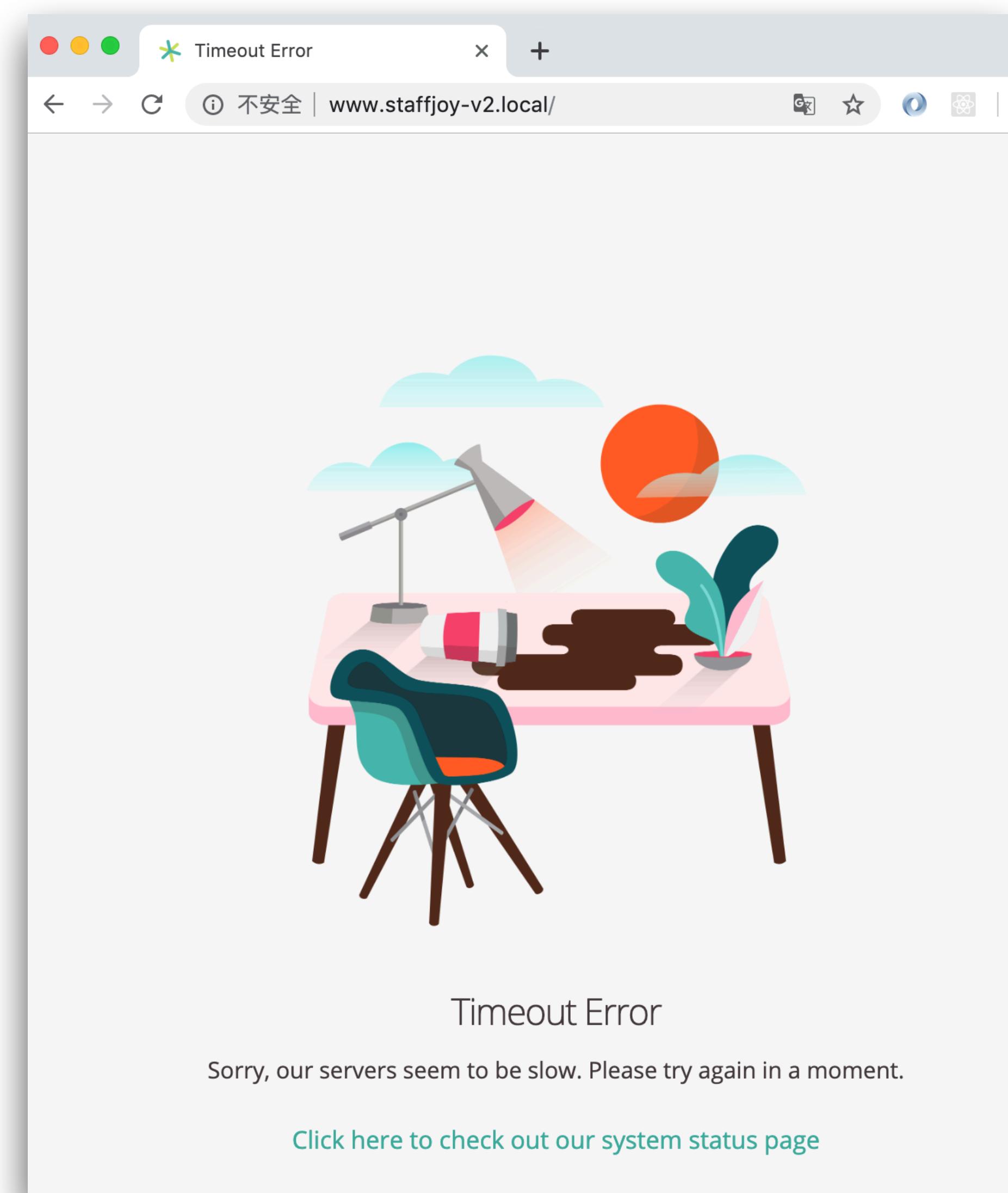
Faraday网关代码解析(上)



第 7 部分

Faraday网关代码解析(下)

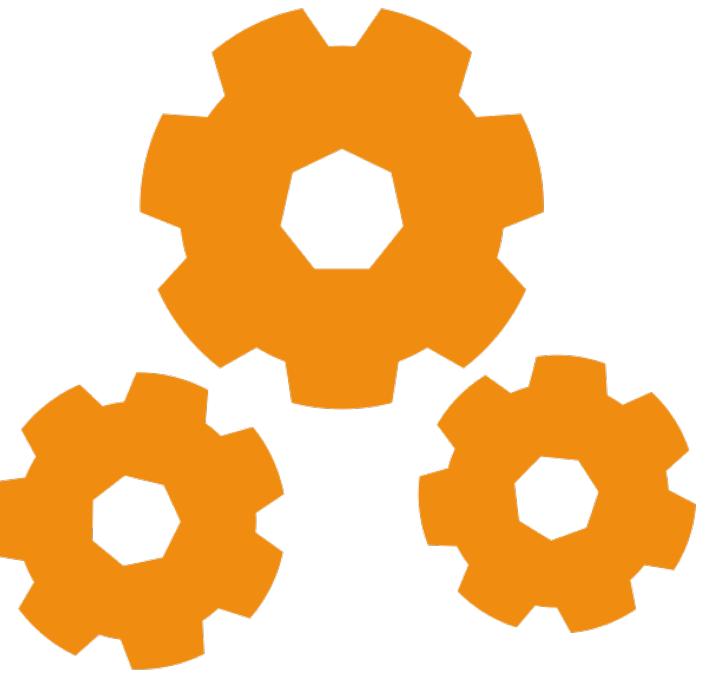
统一异常处理



第 8 部分

生产级网关需要考虑哪些环节？

生产扩展点



- 限流熔断
- 动态路由和负载均衡
- 基于 Path 的路由
 - `api.xxx.com/pathx`
- 截获器链
- 日志采集和 Metrics 埋点
- 响应流优化

第 9 部分

主流开源网关概览

主流开源网关概览

	支持公司	实现语言	亮点	不足
Nginx (2004)	Nginx Inc	C/Lua	高性能，成熟稳定	门槛高，偏运维，可编程弱
Kong (2014)	Kong Inc	OpenResty/Lua	高性能，可编程API	门槛较高
Zuul (2012)	Netflix/Pivotal	Java	成熟，简单门槛低	性能一般，可编程一般
Spring Cloud Gateway (2016)	Pivotal	Java	异步，配置灵活	早期产品
Envoy (2016)	Lyft	C++	高性能，可编程API/ ServiceMesh集成	门槛较高
Traefik (2015)	Containous	Golang	云原生，可编程API/对接各 种服务发现	生产案例不多

参考链接

1. **Nginx** <https://www.nginx.com/>
2. **HAProxy** <http://www.haproxy.org/>
3. **Kong** <https://konghq.com/kong/>
4. **Envoy** <https://www.envoyproxy.io/>
5. **Traefik** <https://traefik.io/>
6. **Zuul** <https://github.com/Netflix/zuul>
7. **Spring Cloud Gateway** <https://spring.io/projects/spring-cloud-gateway>
8. **Resilience4j** <https://github.com/resilience4j/resilience4j>
9. **Hystrix** <https://github.com/Netflix/Hystrix>
10. **Spring Cloud Netflix** <https://spring.io/projects/spring-cloud-netflix>
11. **Micrometer** <https://micrometer.io/>



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