



Kubernetes Community Days

NGINX Ingress Controller



**Kubernetes
Community Days**



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NGINX/OpenResty
开源项目贡献者

有哪些Ingress Controller

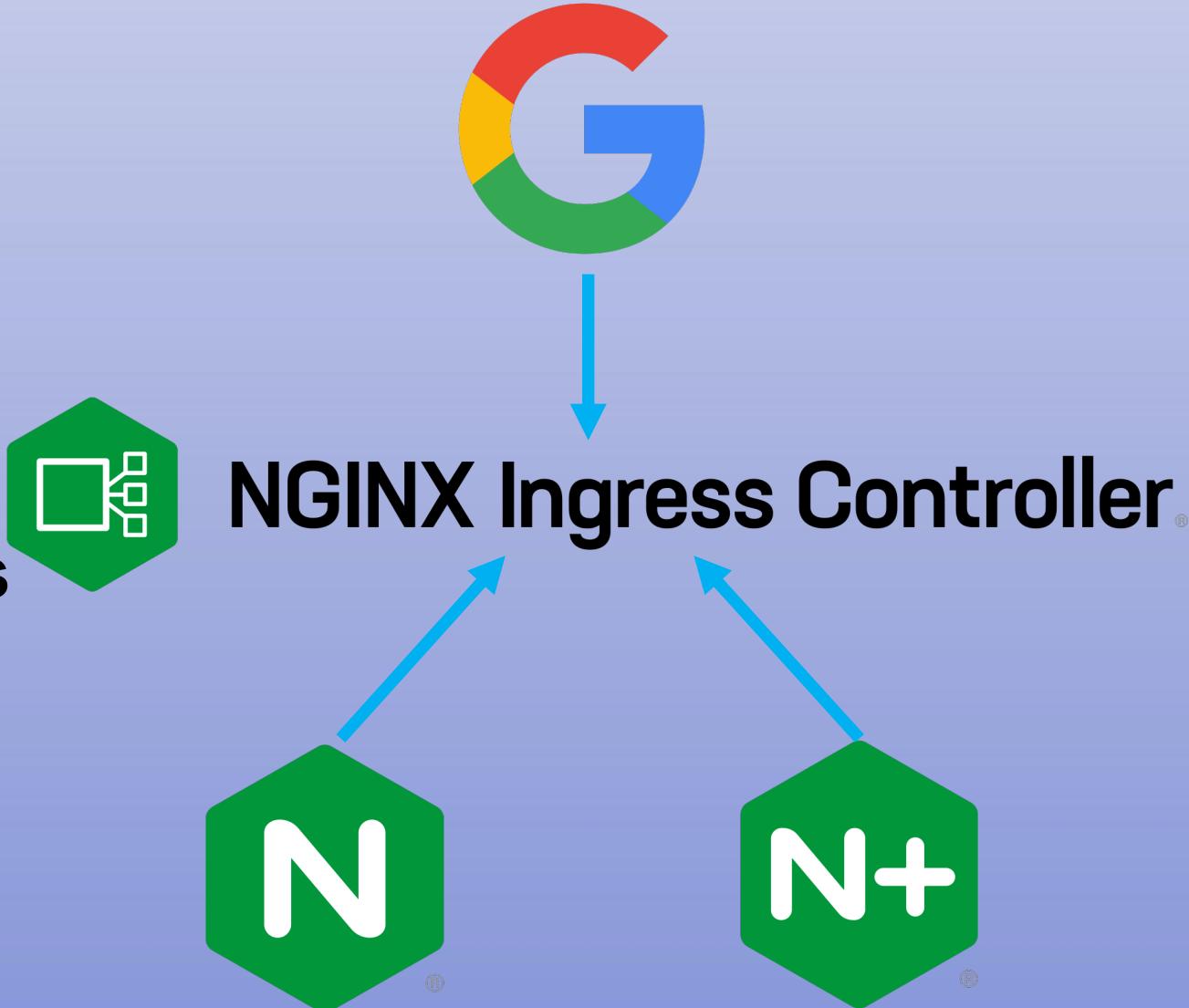


■ **kubernetes/Ingress-nginx**

- Google主导开发
- 简称为GIC
- 基于NGINX + Lua

■ **nginxinc/kubernetes-ingress**

- NGINX公司主导开发
- 简称为NIC/KIC
- 基于NGINX / NGINX Plus



Mergeable Ingress



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- 对Ingress的扩展
- 更精细地控制路由规则
- 分离server/location配置
- master/minion

```
26 metadata:  
27   name: ngx-cafe-master  
28 annotations:  
29   # master config  
30   nginx.org/mergeable-ingress-type: "master"  
31  
32   nginx.org/proxy-connect-timeout: '30s'  
33   #nginx.org/server-tokens: 'False'  
34   nginx.org/lb-method: 'ip_hash'  
35  
36 spec:  
37   # must set in k8s 1.18+  
38   ingressClassName: ngx-cafe  
39  
40 rules:  
41   - host: www.ngx.cafe
```

Master/Minion Ingress



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```
71 metadata:  
72   name: ngx-tea-minion  
73   annotations:  
74     # minion config  
75     nginx.org/mergeable-ingress-type: "minion"  
76  
77     nginx.org/lb-method: 'least_conn'  
78     nginx.org/proxy-connect-timeout: '10s'  
79     nginx.org/keepalive: '30'  
80     nginx.org/location-snippets:  
81       add_header xxx ngx-snippet  
82  
83     metadata:  
84       name: ngx-coffee-minion  
85       annotations:  
86         nginx.org/mergeable-ingress-type: "minion"  
87         nginx.org/lb-method: 'hash $remote_addr consistent'  
88  
89     spec:  
90       ingressClassName: ngx-cafe  
91  
92     rules:  
93     - host: www.ngx.cafe  
94       http:  
95         paths:  
96           - path: /coffee
```

Snippets



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- 可以直接嵌入NGINX指令
- 用于ConfigMap/Ingress
- 共有5种：
 - main-snippets
 - http-snippets
 - server-snippets
 - location-snippets
 - stream-snippets

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: ngx-plain-config
data:
  worker-processes: '1'
  worker-connections: '512'
  proxy-connect-timeout: '10'

  main-snippets: |
    thread_pool test threads=16;

  location-snippets: |
    add_header xxx ngx-snippet;
```

■ VirtualServer

- 定义域名级配置
- 相当于Master Ingress
- 结构近似NGINX配置
- 正则表达式路由
- 支持使用NGINX变量
- 流量拆分
- 错误重定向
- 更多.....

■ VirtualServerRoute

- 精细定义路由规则
- 相当于Minion Ingress

■ TransportServer

- TCP负载均衡
- UDP负载均衡

■ Policy

- 定义各种控制策略
- IP地址限制
- 限流限速
- Ingress mTLS
- egress mTLS



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