



UCAN
下午茶

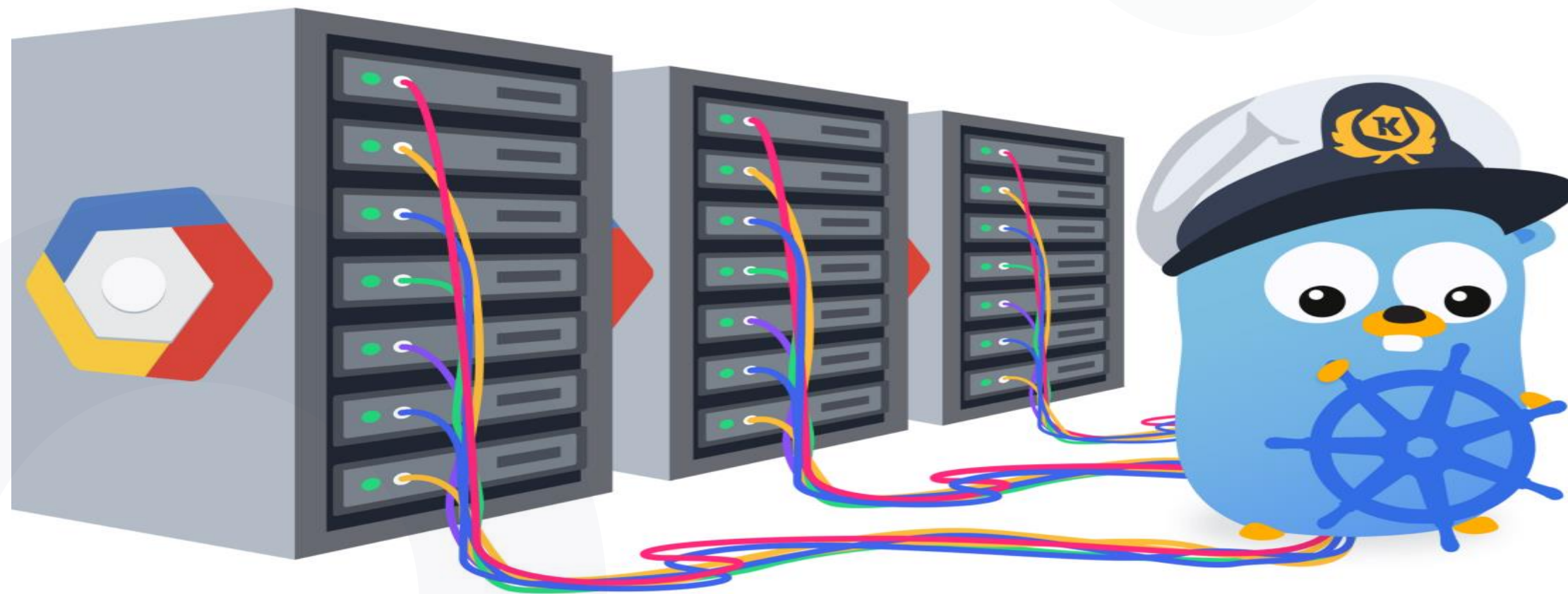
Kubernetes生产环境管理

演讲人：张苗磊

UCLLOUD 优刻得

Kubernetes 生产环境

- Overview

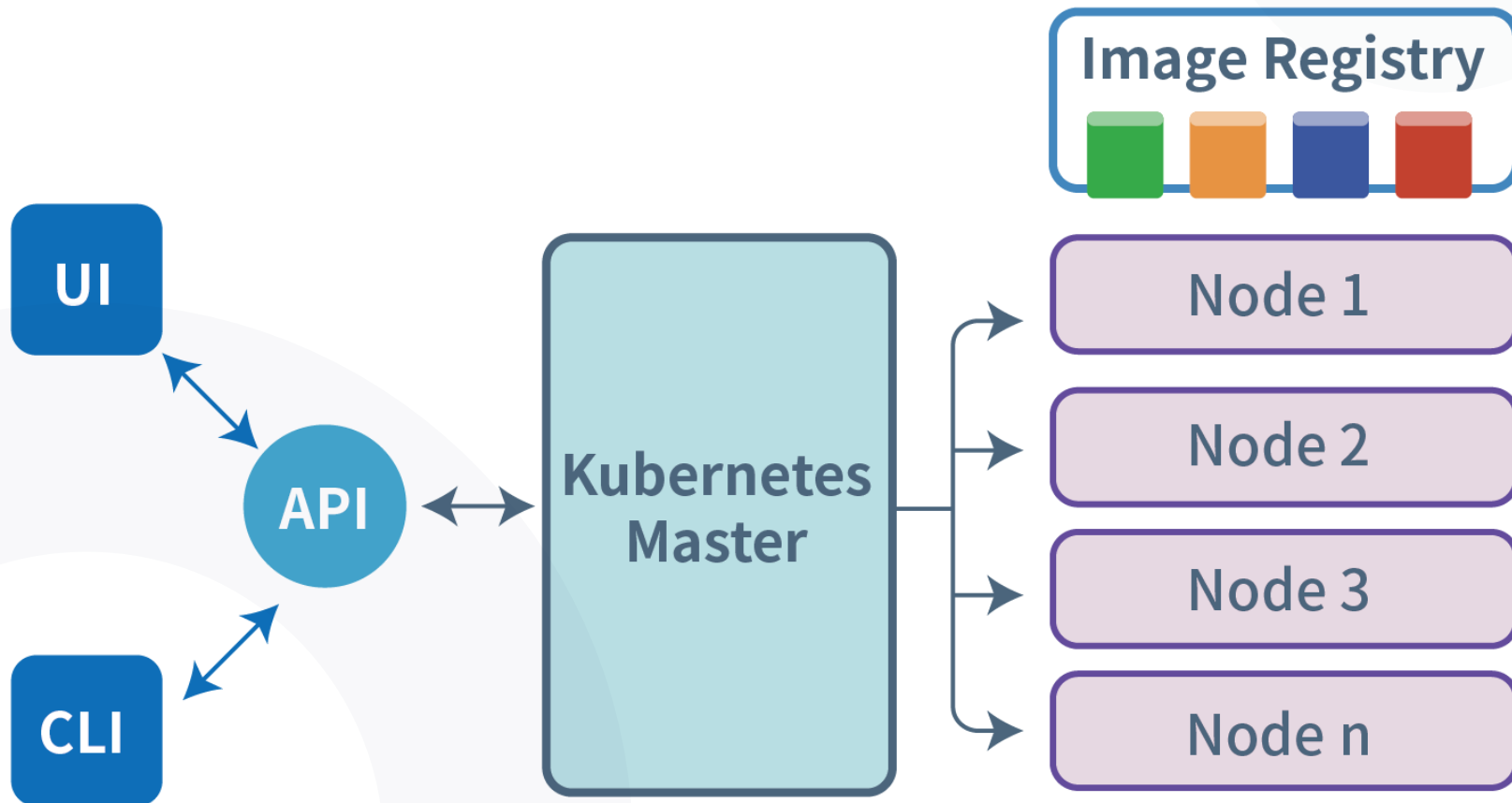


Kubernetes 生产环境



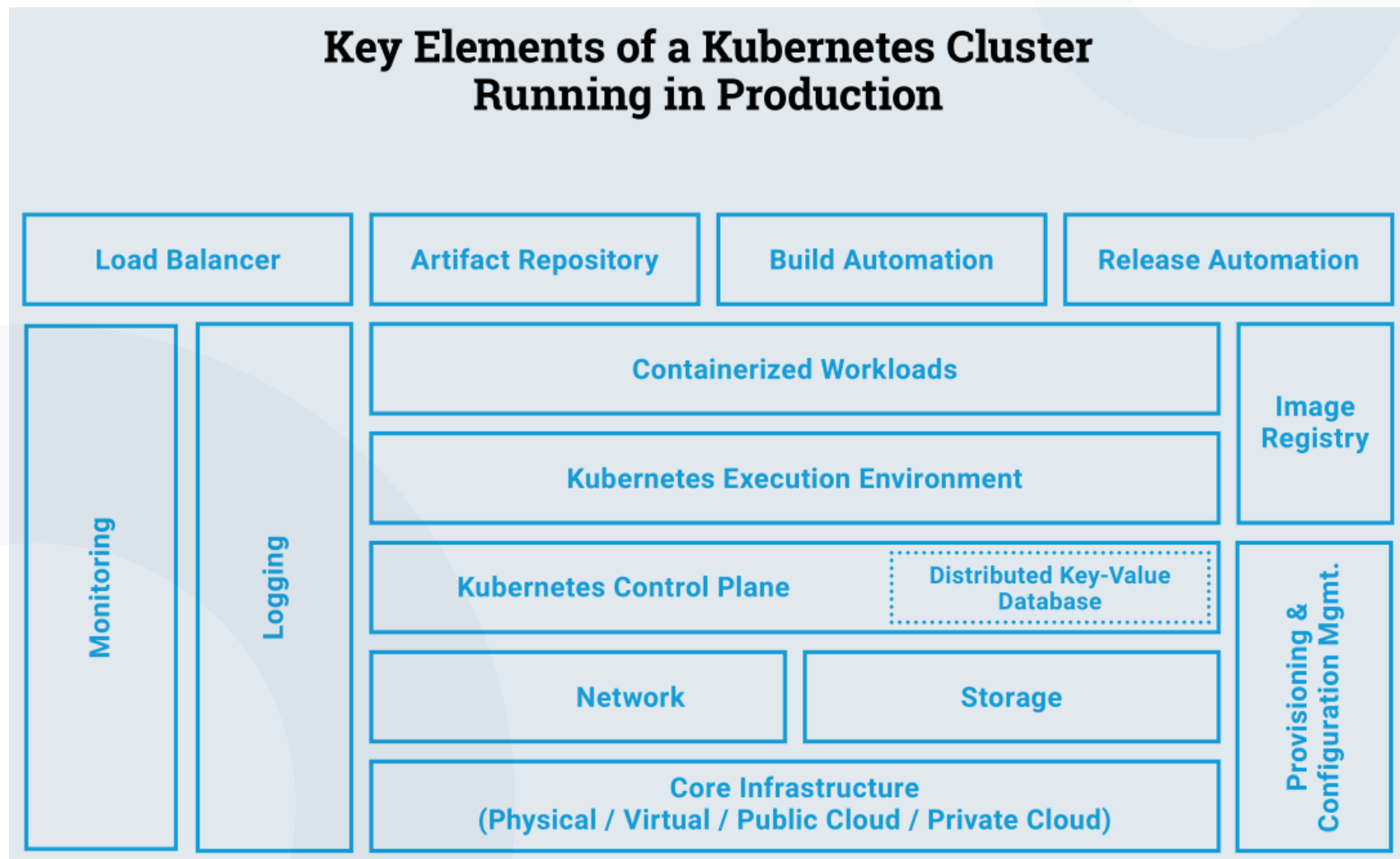
- Overview

Kubernetes Architecture



Kubernetes 生产环境

- Overview




Kubernetes 生产环境

- Overview



certified Kubernetes - Hosted (38)

Microsoft Azure, Alibaba Cloud, Baidu AI, Cloud Container Engine, Google Kubernetes Engine, Intel, Intel Cloud, Kingsoft Cloud, Mail.ru Cloud, Tencent Cloud, VMware, Yandex Cloud



UCloud Kubernetes Service (UK8S)
UCloud Information Technology
Platform · Certified Kubernetes - Hosted

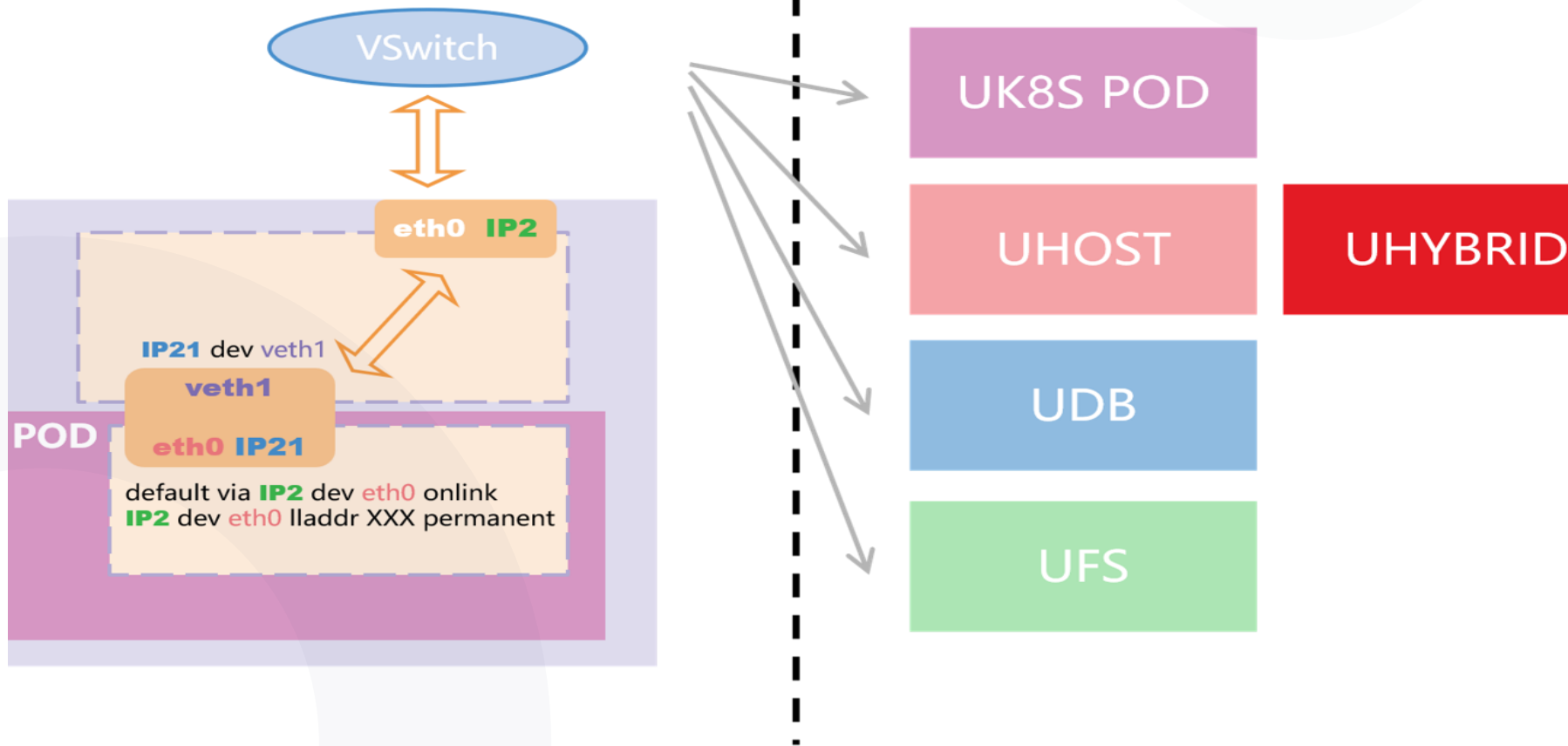
UK8S is a container service based on Kubernetes, integrated with the cloud product of UCloud platform.

Website: <https://www.ucloud.cn/site/product/uk8s.html>
Crunchbase: <https://www.crunchbase.com/organization/ucloud-information-technology>
LinkedIn: <https://www.linkedin.com/company/ucloud>
Headquarters: Shanghai, China Headcount: 251-500
Funding: \$314.43M

CNCF Silver Member
License: Not Open Source
731 Tweets

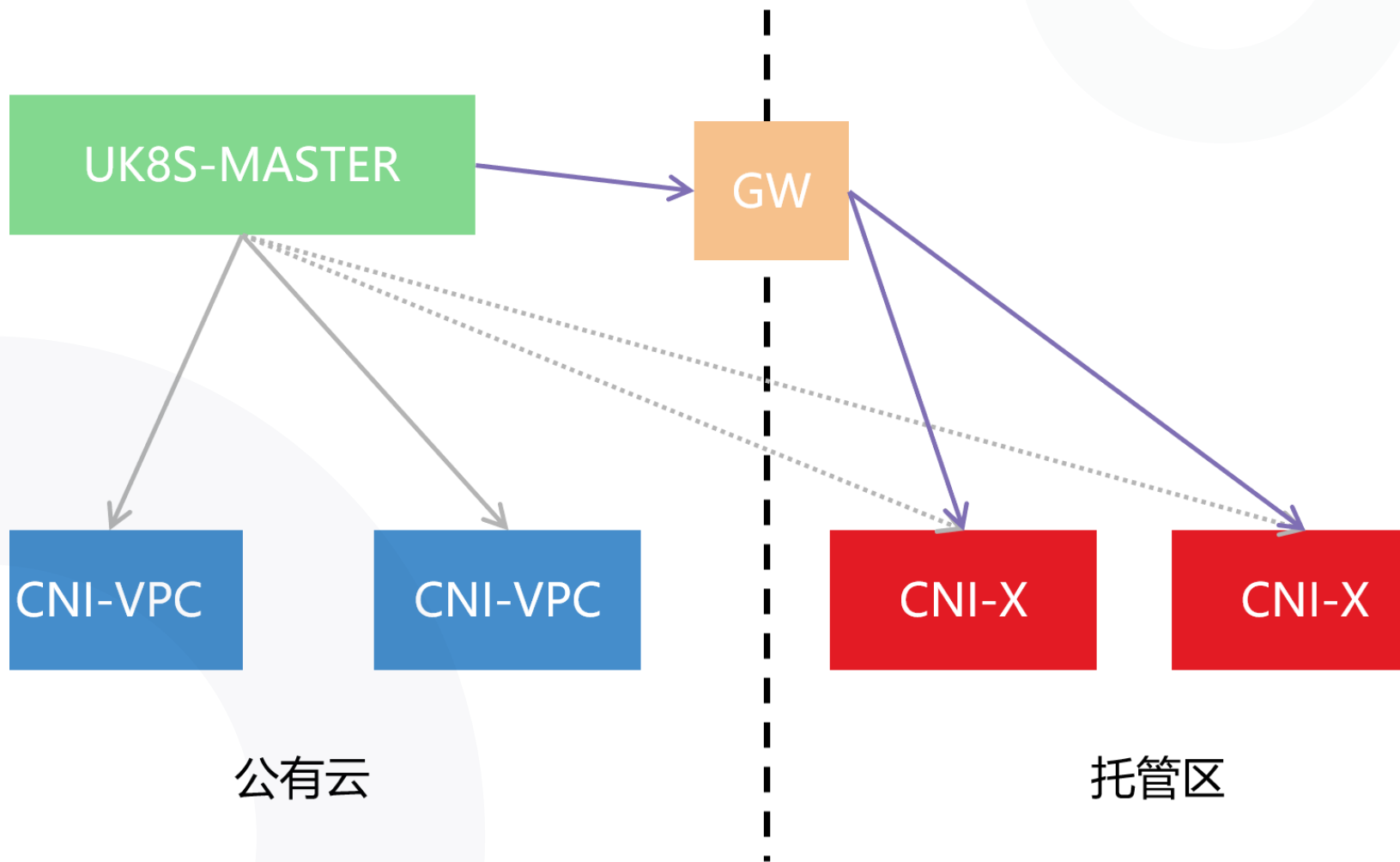
Kubernetes 生产环境

- Network



Kubernetes 生产环境

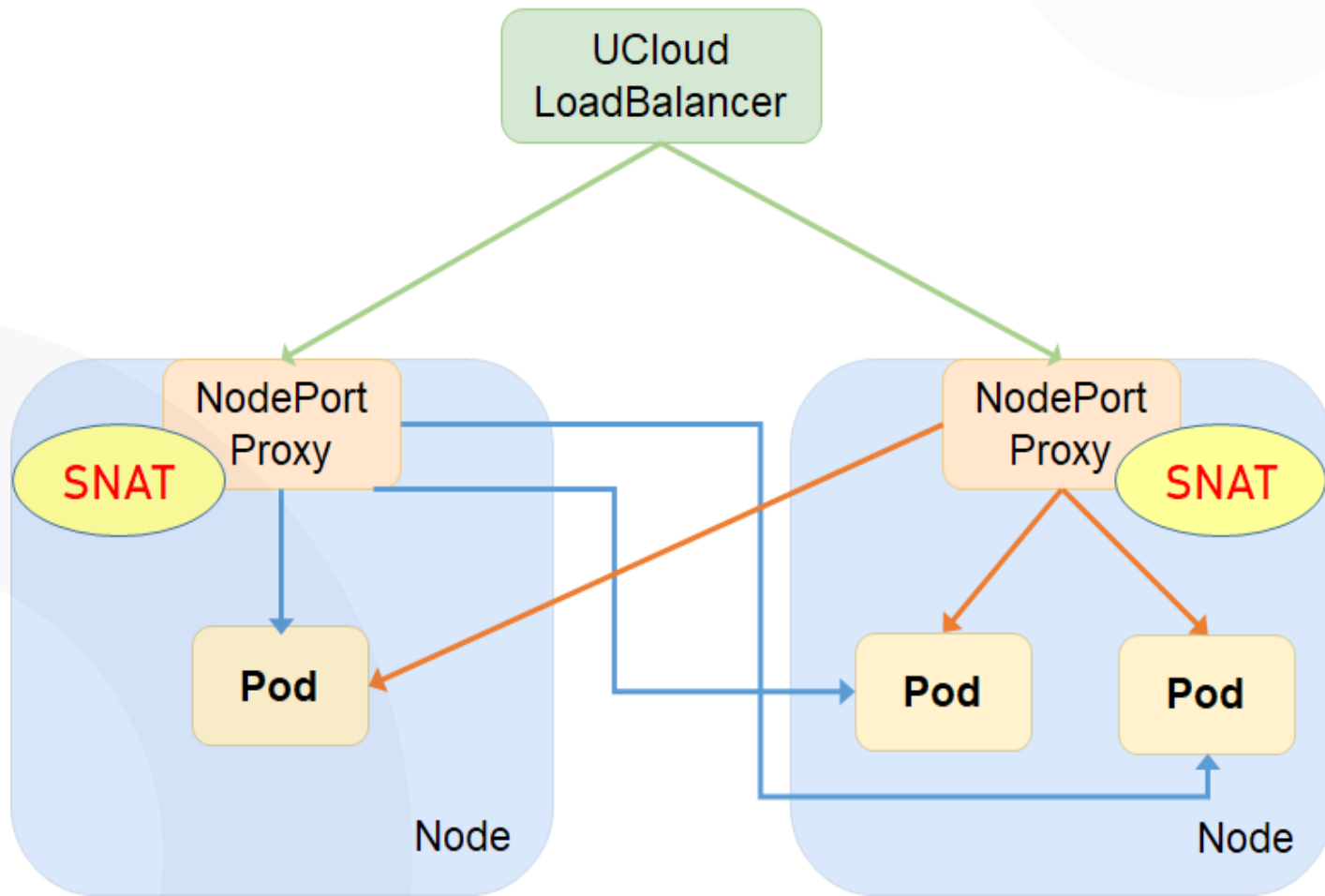
- Network



Kubernetes 生产环境



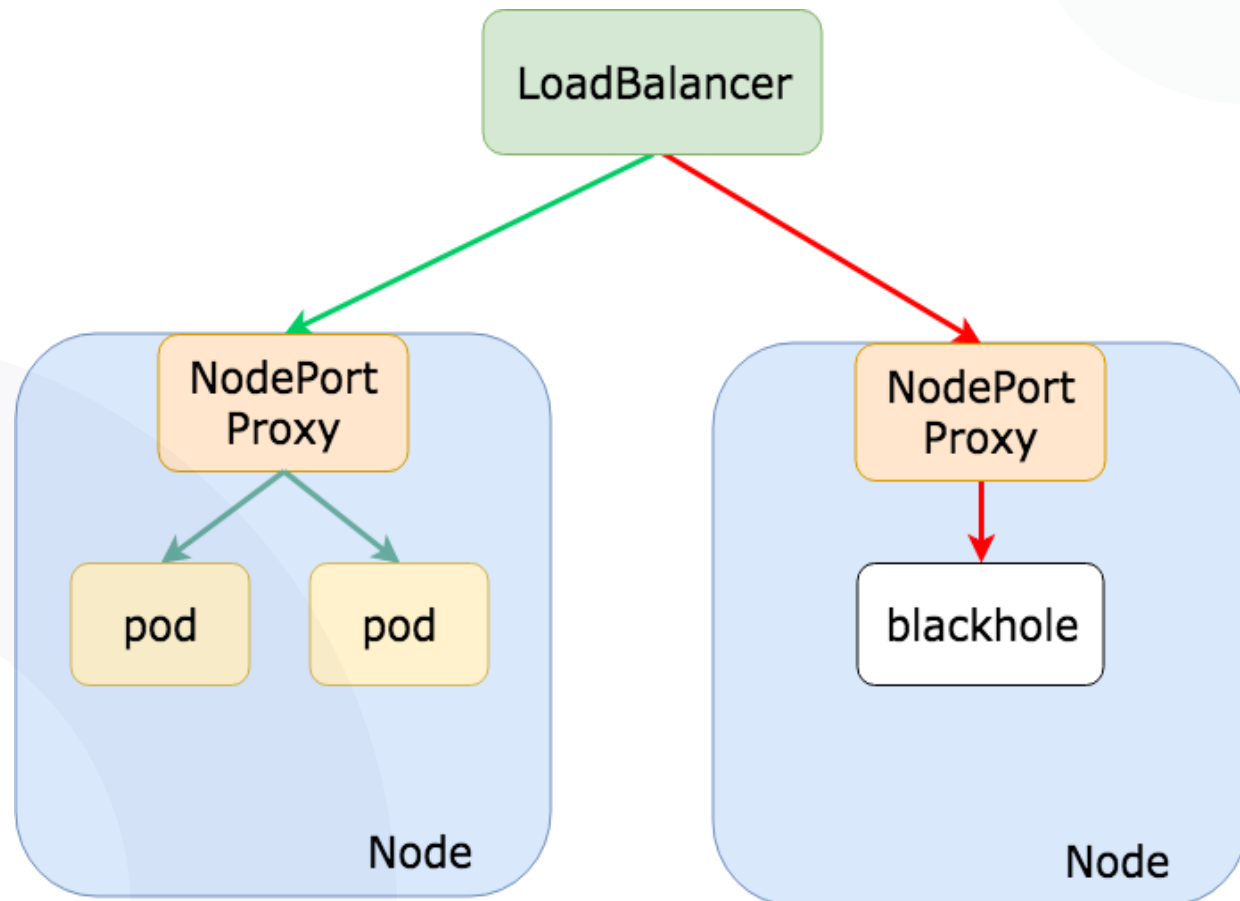
- LoadBalance



Kubernetes 生产环境

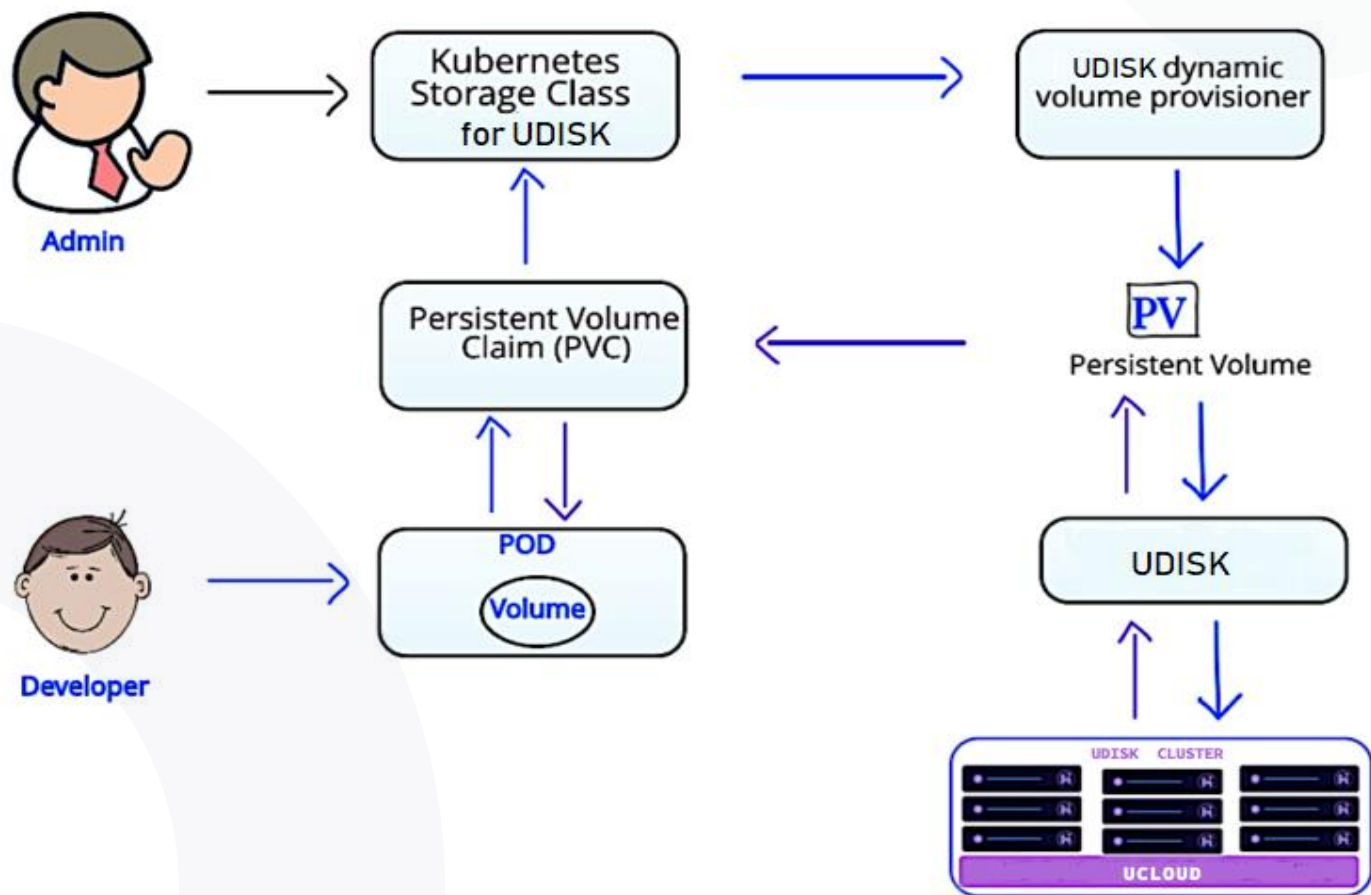


- LoadBalance



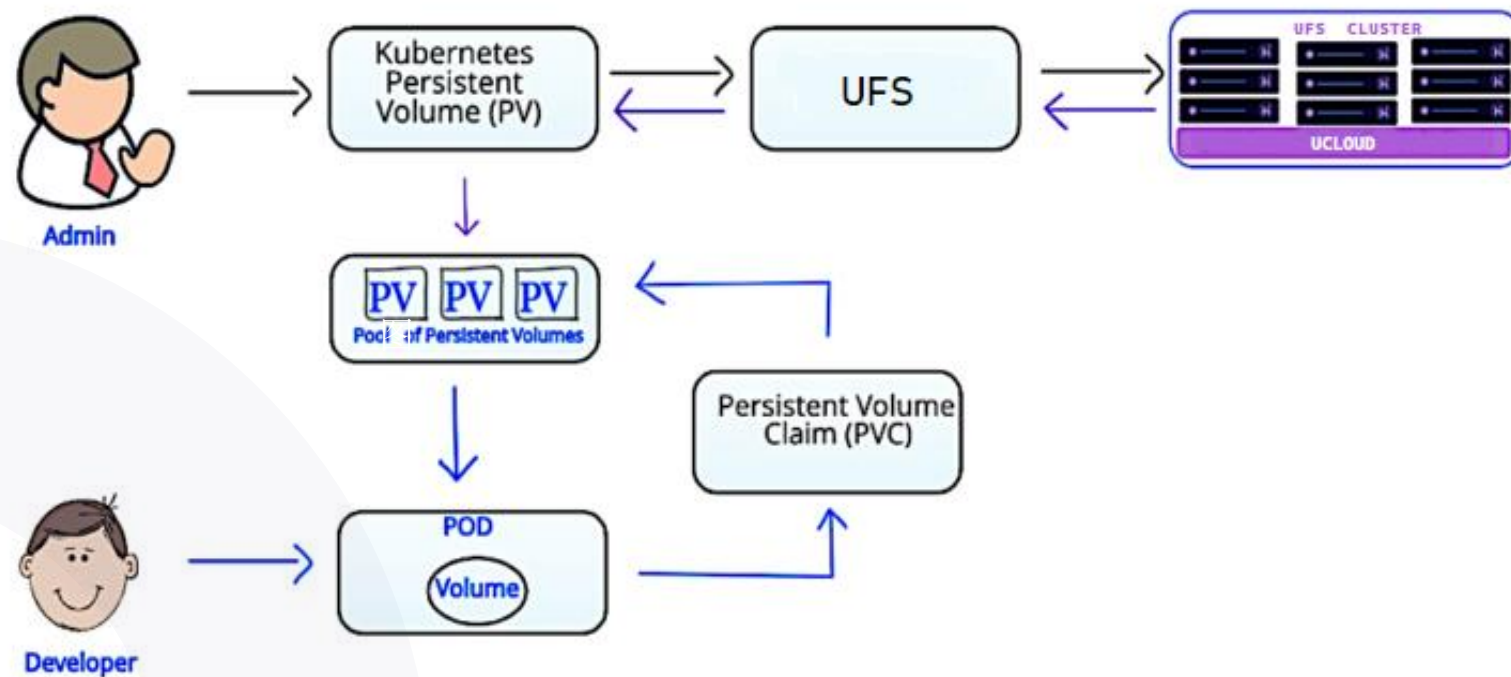
Kubernetes 生产环境

- Storage



Kubernetes 生产环境

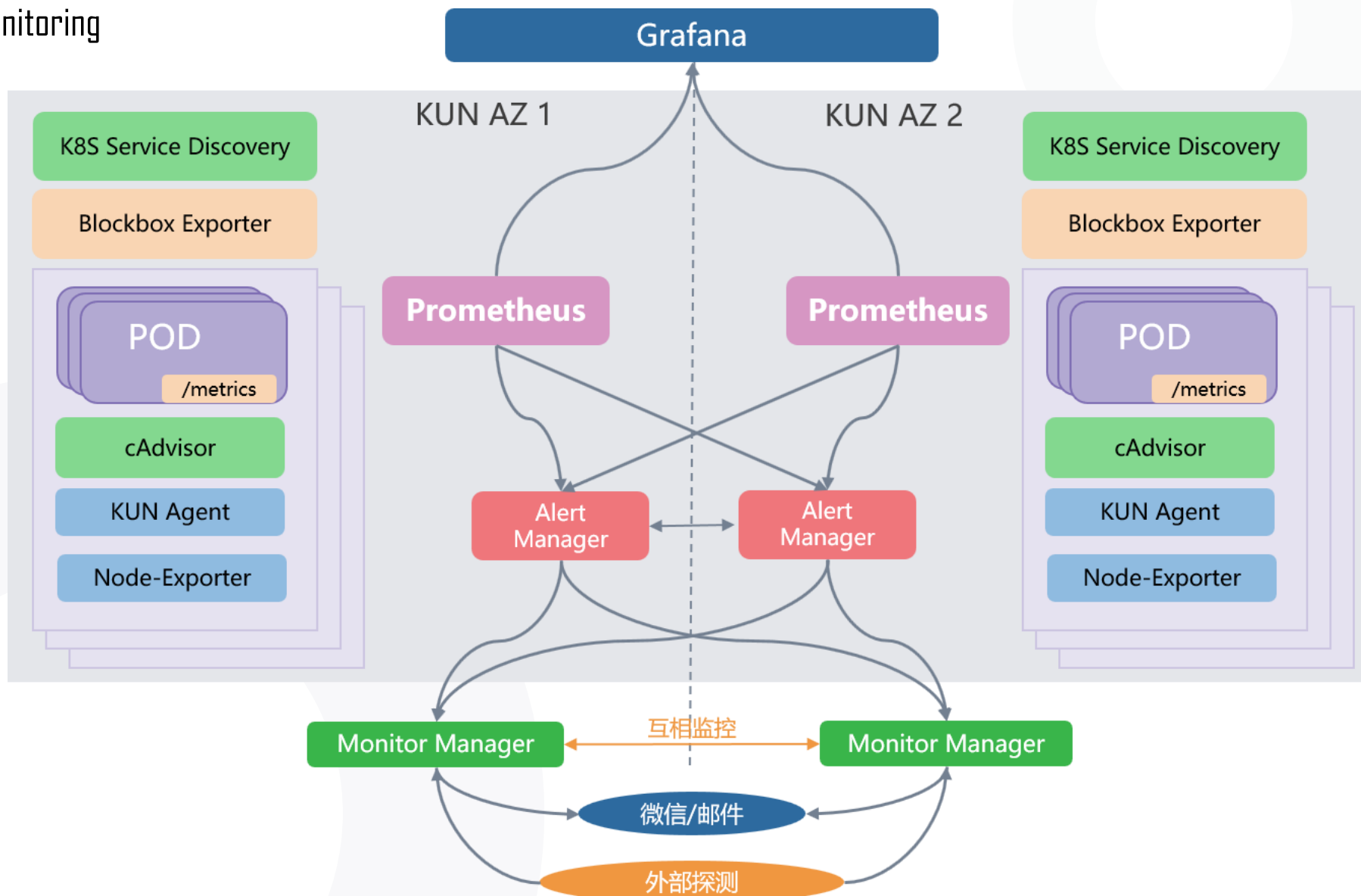
- Storage



Kubernetes 生产环境

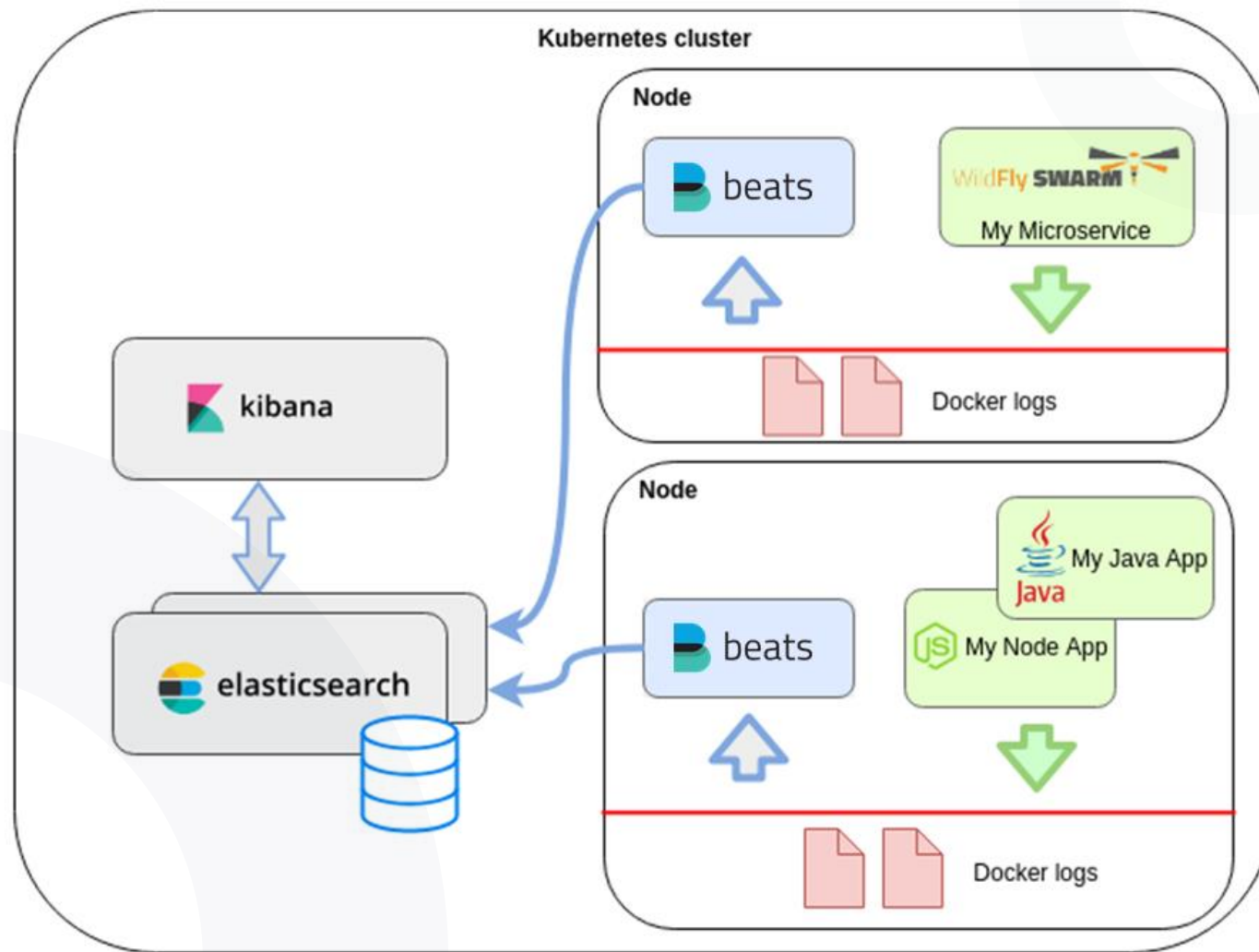


- Monitoring



Kubernetes 生产环境

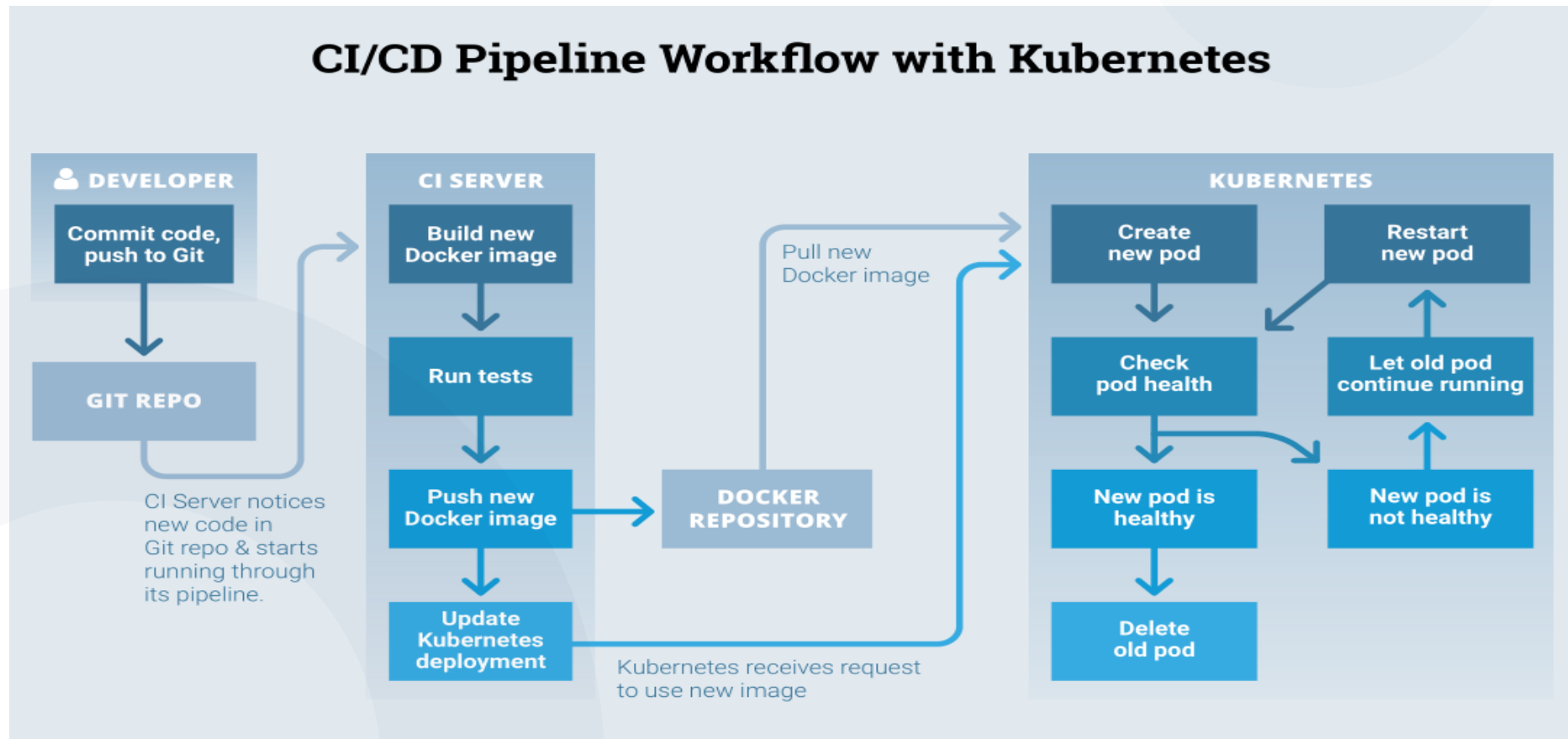
- Log



Kubernetes 生产环境



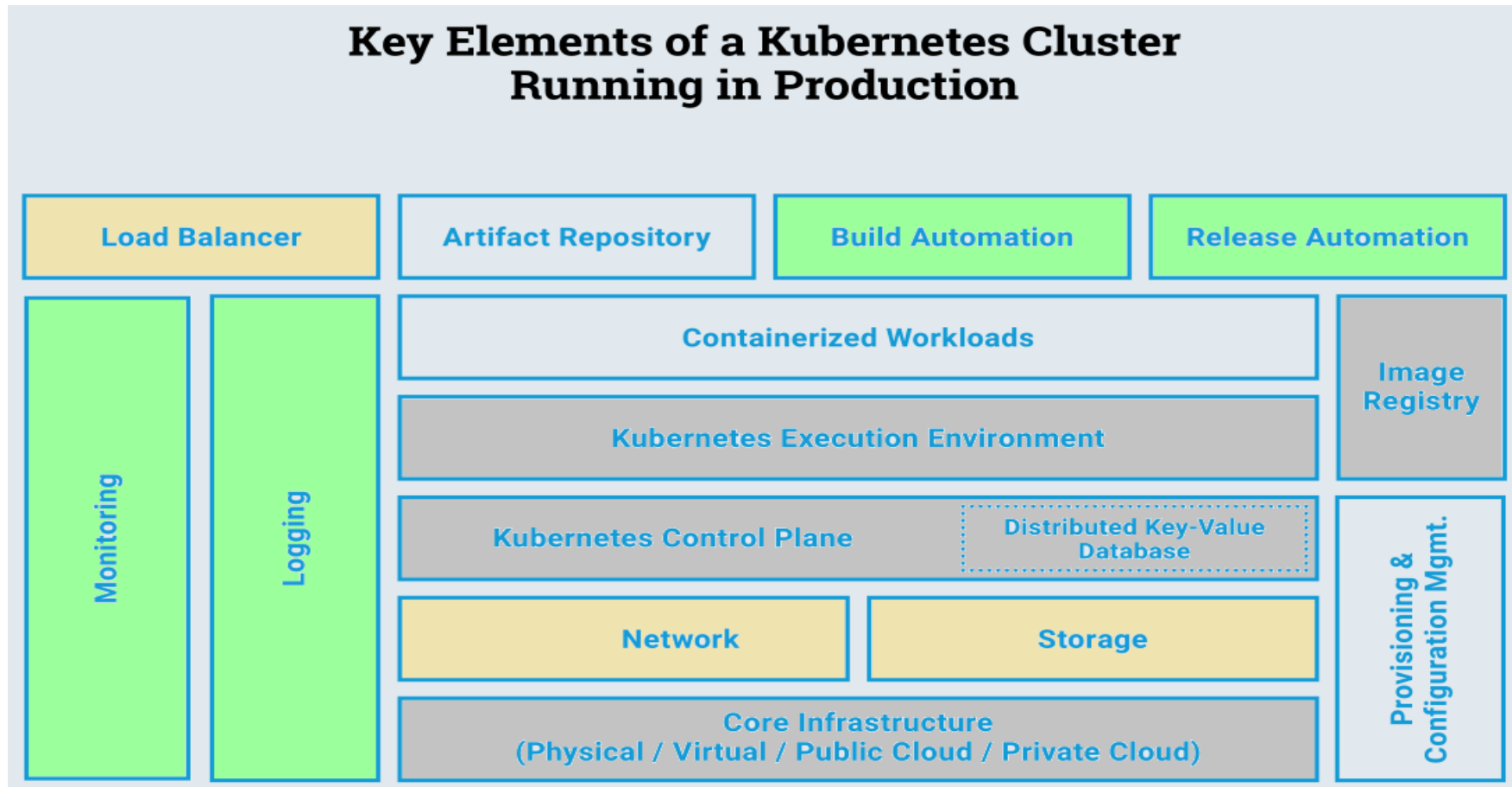
- CI/CD



Kubernetes 生产环境



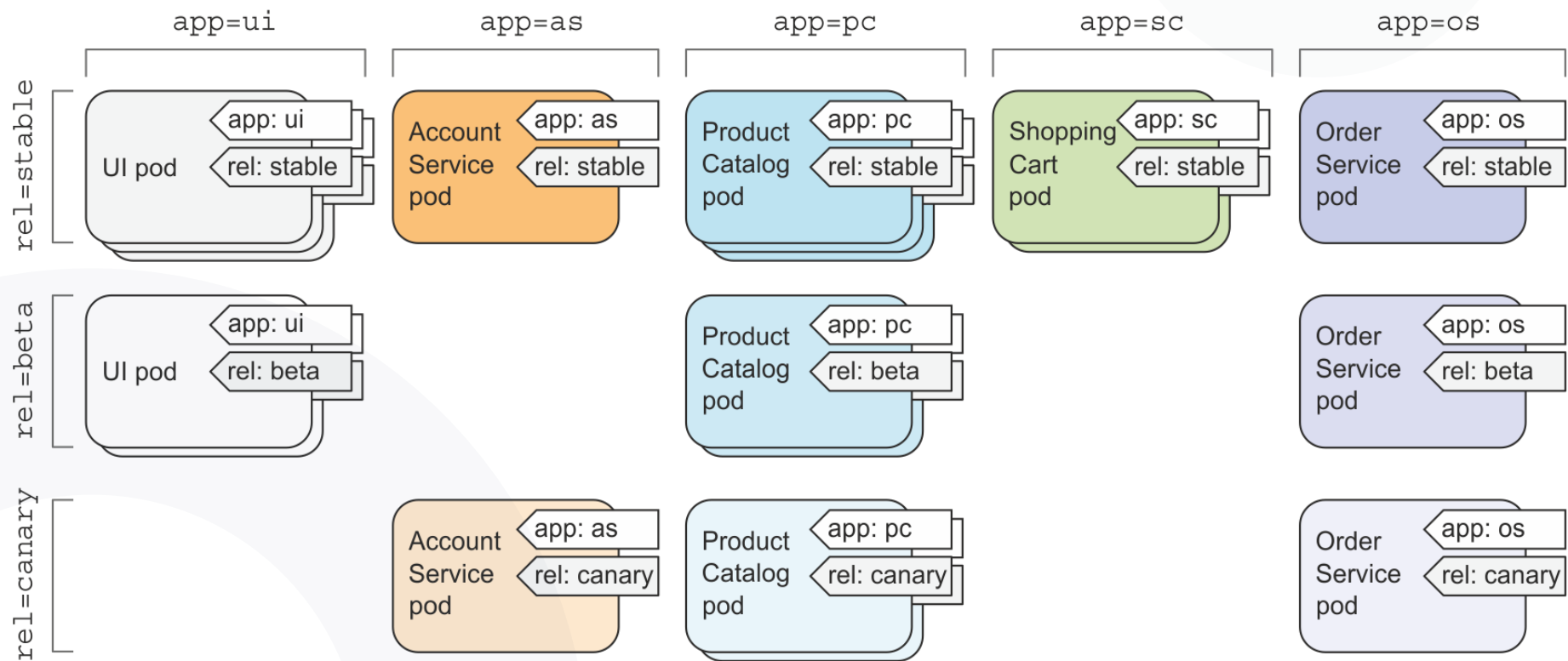
- Summary



Kubernetes 管理



- 项目管理

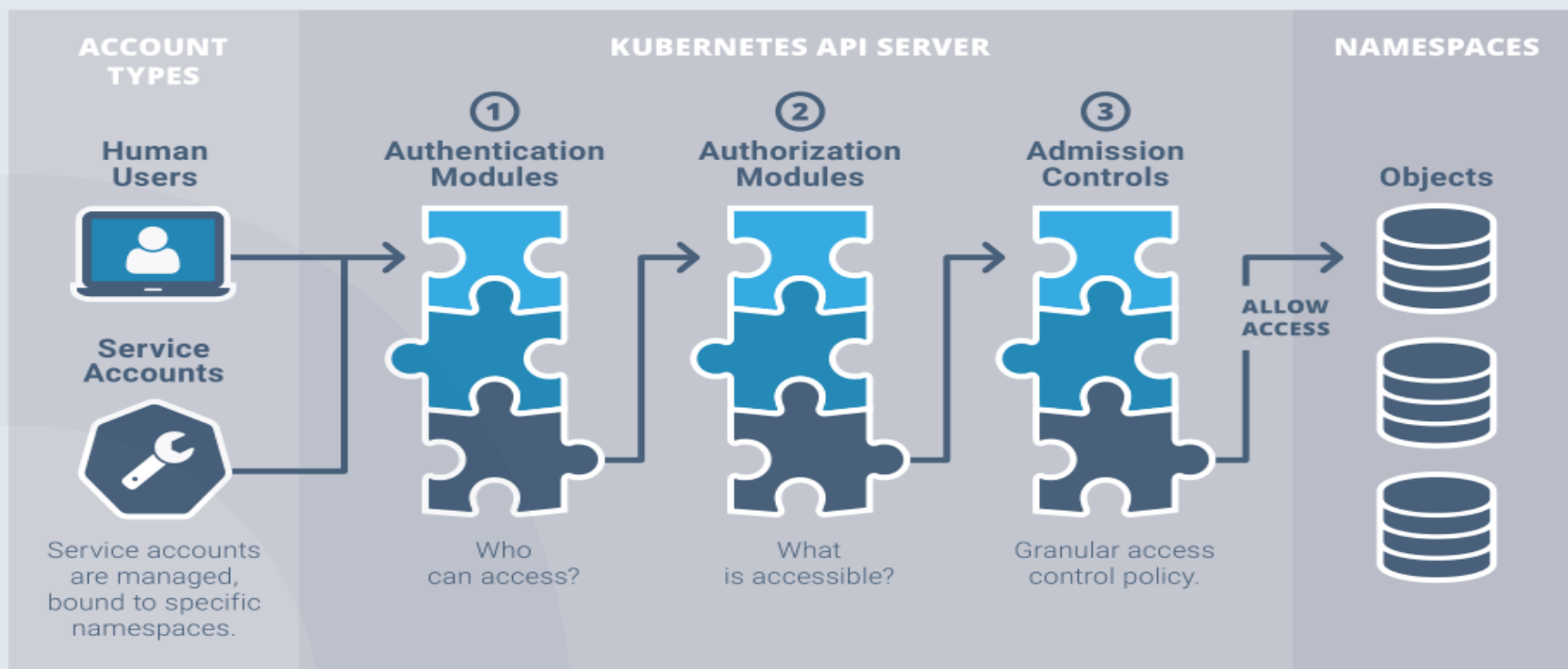


Kubernetes 管理

- 账户管理

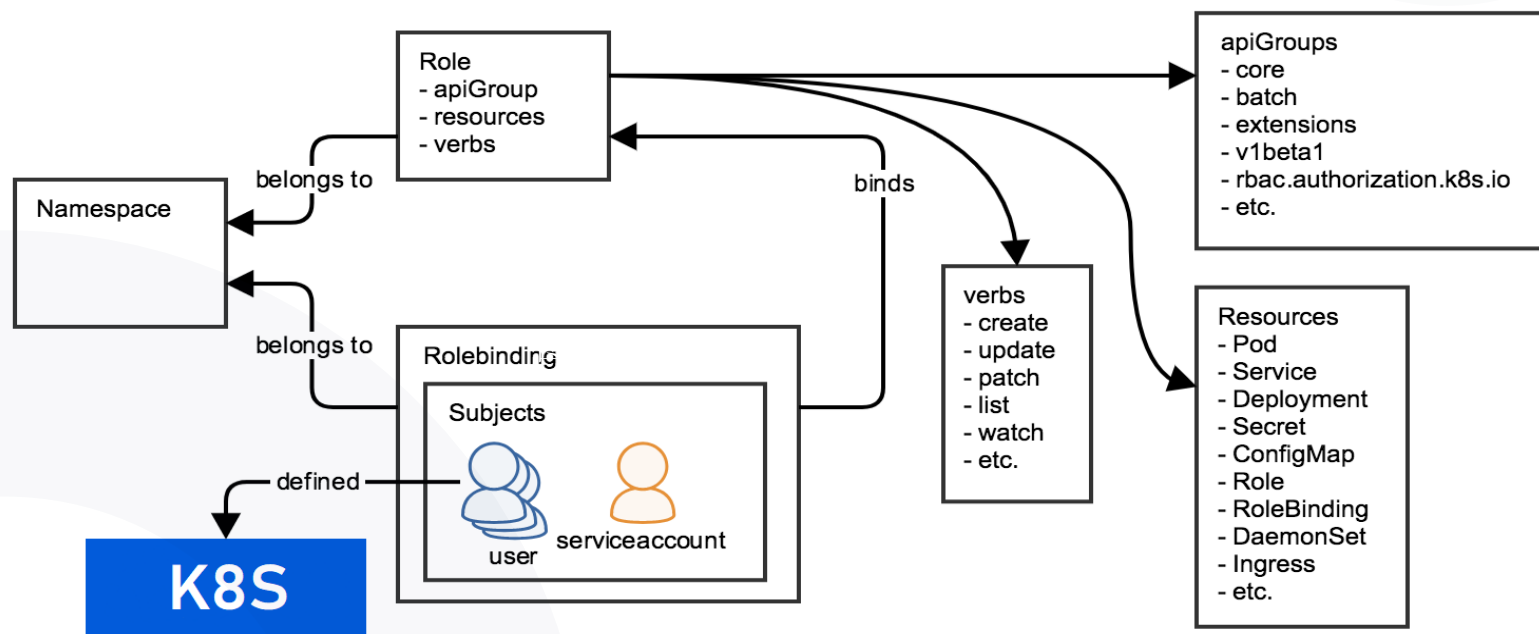


API Requests Are Authenticated and Authorized With Three Kubernetes Modules



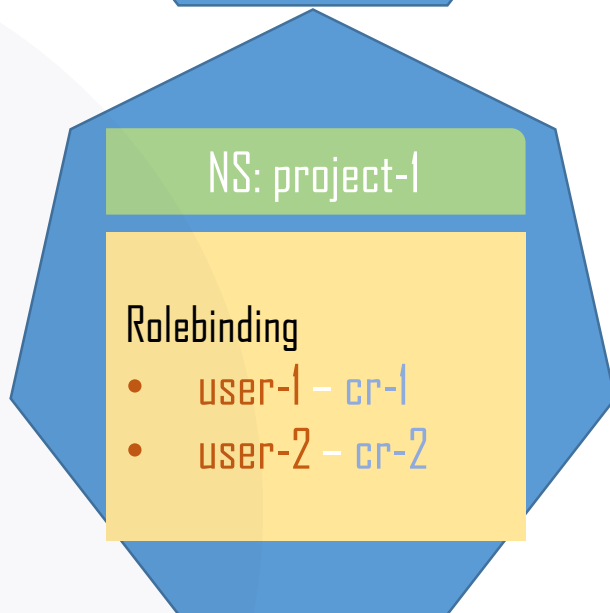
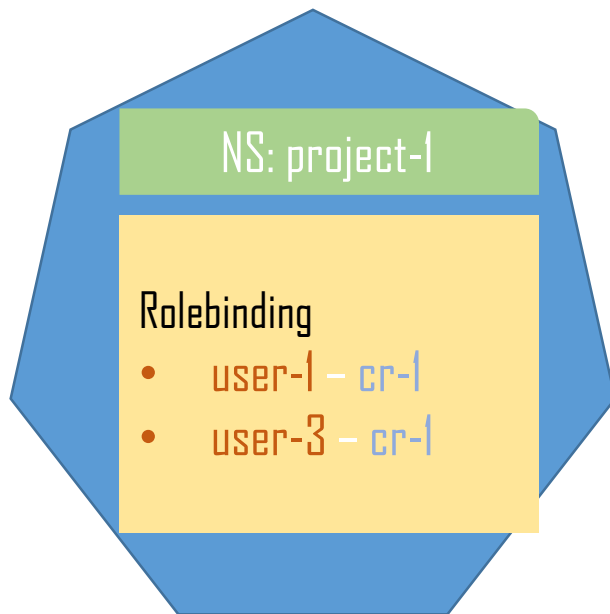
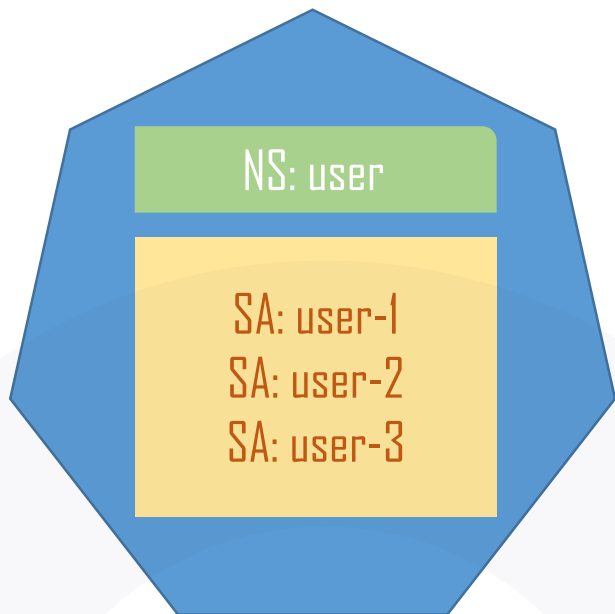
Kubernetes 管理

● 账户管理



Kubernetes 管理

- 账户管理



ClusterRole: CR-1

Resource:

- Pods
- Deployments
- StatefulSets

Action:

- "*"

ClusterRole: CR-2

Resource:

- Pods
- Deployments
- StatefulSets

Action:

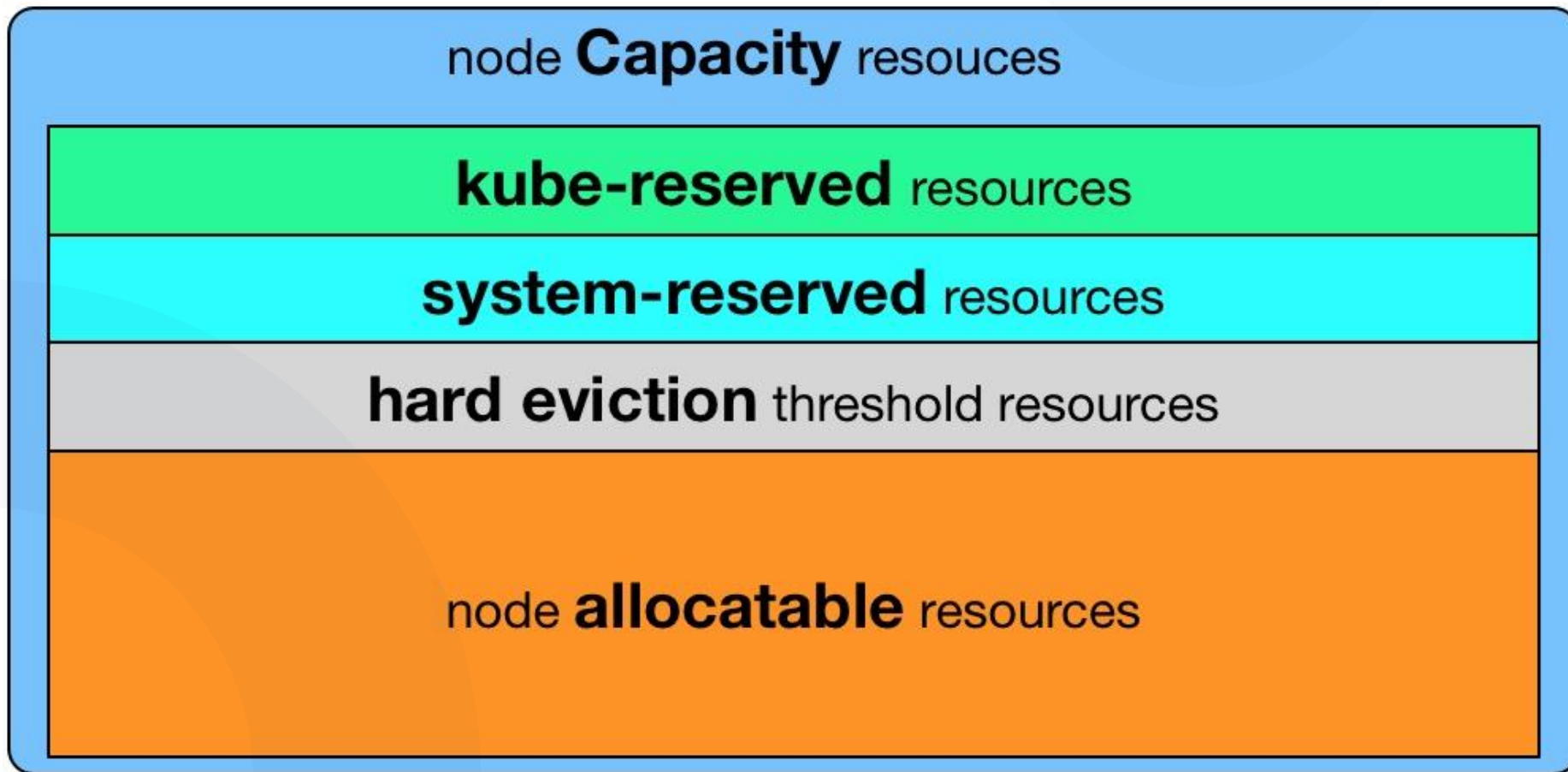
- Get
- List
- Watch



Kubernetes 管理



- 资源管理

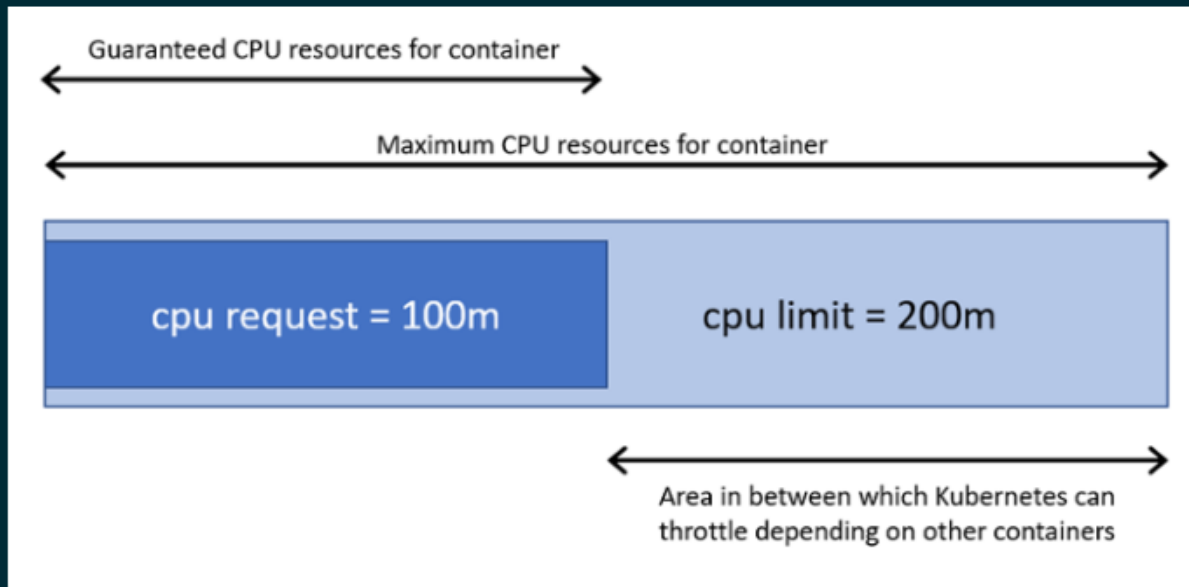


Kubernetes 管理



- 资源管理

```
apiVersion: v1
kind: Pod
metadata:
  name: qos-demo
spec:
  containers:
  - name: qos-demo-ctr
    image: nginx
    resources:
      limits:
        memory: "200Mi"
        cpu: "700m"
      requests:
        memory: "200Mi"
        cpu: "700m"
```



Kubernetes 管理



● 资源管理

request 是否配置	limits 是否配置	两者的关系	QoS	说明
是	是	requests = limits	Guaranteed	所有容器的 CPU 和 memory 都必须配置相同的 requests 和 limits。
是	是	request < limit	Burstable	只要有容器配置了 CPU 或者 memory 的 request 和 limits 就行
是	否		Burstable	只要有容器配置了 CPU 或者 memory 的 request 就行
否	是		Guaranteed/ Burstable	如果配置了 limits, kubernetes 会自动把对应资源的 requests 设置成和 limits 一样。如果所有容器所有资源都配置了 limits, 那就是 Guaranteed; 如果只有部分配置了 limits, 就是 Burstable
否	否		Best Effort	所有的容器都没有配置资源 requests 或 limits

Kubernetes 管理



- 资源管理
- 使用limitrange设置默认的Request / Limit

```
$ kubectl -n prj-test describe limitranges
Name:      default
Namespace: prj-test
Type       Resource  Min  Max  Default Request  Default Limit  Max Limit/Request Ratio
-----
Pod        cpu        -    8   -          -              -
Pod        memory    -    16Gi -          -              -
Container  cpu        -    -   100m       1              -
Container  memory    -    -   200Mi      2Gi            -
```

Kubernetes 管理

- 资源管理

- Pod Horizontal AutoScaling
- Pod Vertical AutoScaling
- Cluster AutoScaler



UKubernetes服务 UK8S / K8S测试

概览 集群 工作负载 服务 存储&配置 应用商店

节点
持久卷
存储类
事件
集群伸缩

伸缩配置

伸缩配置 已开启 更改

集群ID	缩容阈值	缩容触发延时	静默时间
uk8s-lvduj42o	50 %	2 min	10 min

添加 删除 [如何使用集群伸缩?](#) ⚙️

<input type="checkbox"/>	伸缩组ID	名称	机型	节点数量	最小值	最大值	创建时间	操作
<input type="checkbox"/>	asg-uxjsc1	autoscale-N	8 16 0	0	0	50	2019-08-15	修改 删除



UCAN
下干茶

THANK YOU

UCLLOUD 优刻得