

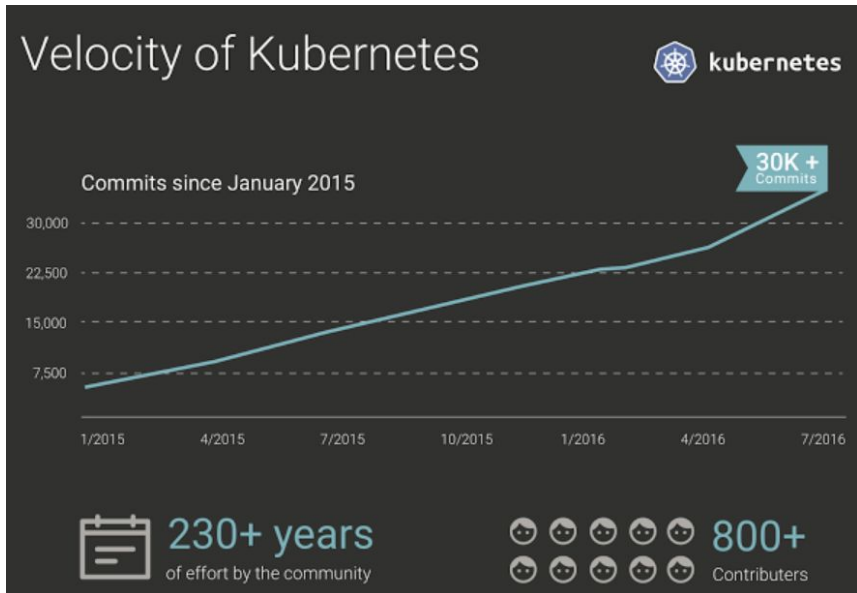
# 一种可视化的Kubernetes管理工具

By niusmallnan

# 议程

1. Kubernetes的迅猛发展以及国内用户的窘境
2. Kubernetes in Rancher
3. 自定义部署过程(在线演示)
4. Q&A

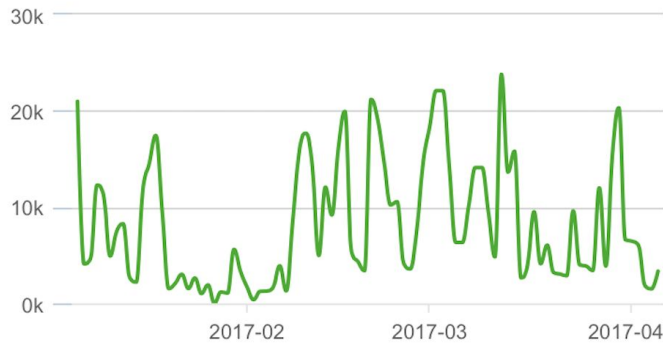
# Kubernetes 热度非凡



Kubernetes 指数

3,342

指数



7日

30日

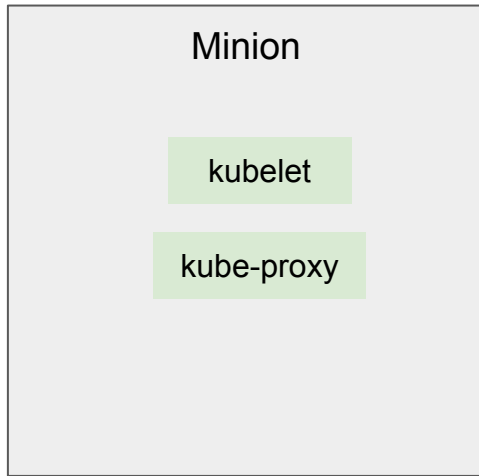
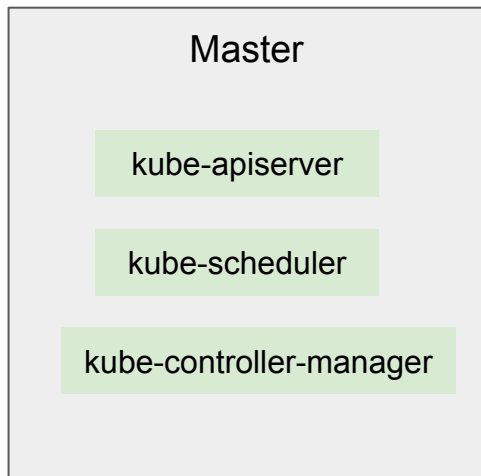
90日

# 国内用户问题

1. 对于大部分用户来说, Kubernetes依然难以使用, 甚至难以部署
2. 存储和网络基础设施管理不够灵活
3. 缺少部署层面的可视化管理
4. 初学者用户很难找到可用顺手的工具
5. ...

# Kubernetes In Rancher

# Kubernetes主要组件



ETCD



# 两种部署模式

无差别调度:

K8s各个组件随机调度到相应节点上

场景:

测试环境兼容性

快速部署简单环境

锁定节点角色:

Compute: kubelet、proxy

Etc: etcd

Orchestration: scheduler、api、  
controller-manager、addon...

场景:

大规模部署

稳定环境

# 部署模式的选择

Name\*

kubernetes

## Configuration Options

**Plane Isolation\***

Choose an option...

- ✓ none
- required

Isolate the data, orchestration and compute planes via host labels. Set to required when running in production.

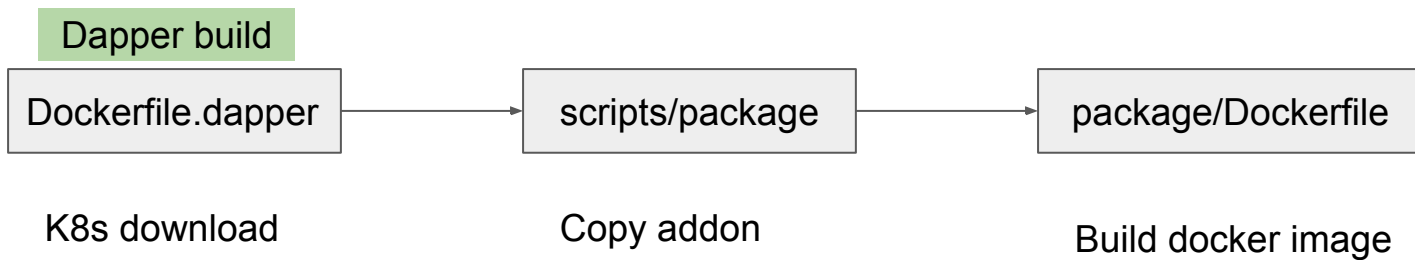


# 自定义部署过程

# All In One package

```
controller-manager:  
  image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3  
  links:  
  - kubernetes:kubernetes  
  command:  
  - kube-controller-manager  
  - --master=https://kubernetes.kubernetes.rancher.internal:6443  
  - --cloud-provider=rancher  
  - --address=0.0.0.0  
  - --kubeconfig=/etc/kubernetes/ssl/kubeconfig  
  - --root-ca-file=/etc/kubernetes/ssl/ca.pem  
  - --service-account-private-key-file=/etc/kubernetes/ssl/key.pem  
  labels:  
    io.rancher.container.agent.role: environmentAdmin  
    io.rancher.container.create_agent: 'true'  
  
scheduler:  
  image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3  
  links:  
  - kubernetes:kubernetes  
  command:  
  - kube-scheduler  
  - --master=http://kubernetes.kubernetes.rancher.internal  
  - --address=0.0.0.0  
  
kubernetes:  
  image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3  
  environment:  
    KUBERNETES_URL: https://kubernetes.kubernetes.rancher.internal:6443  
  links:
```

# Build by Dapper



# Fork library catalog

Branch: master | rancher-catalog / infra-templates / k8s /

deniseschannon committed with [ibuildthecloud v1.5.2](#)

|    |                              |
|----|------------------------------|
| .. |                              |
| 0  | 1.2 (#234)                   |
| 1  | 1.2 (#234)                   |
| 10 | 1.2 (#234)                   |
| 11 | 1.2 (#234)                   |
| 12 | V1.3.0 (#392)                |
| 13 | V1.3.0 (#392)                |
| 14 | V1.3.1 rc3                   |
| 15 | V1.3.0 (#392)                |
| 16 | V1.3.0 (#392)                |
| 17 | V1.4.0 updates (#445)        |
| 18 | Rancher v1.5.0               |
| 19 | updated k8s config questions |
| 2  | 1.2 (#234)                   |
| 20 | removed space                |
| 21 | v1.5.2                       |

Branch: master | rancher-catalog / infra-templates / k8s / 21 /

deniseschannon committed with [ibuildthecloud v1.5.2](#)

..

- README.md
- docker-compose.yml.tpl
- rancher-compose.yml

220 lines (208 sloc) | 7.13 KB

```

1 kubelet:
2   labels:
3     io.rancher.container.dns: "true"
4     io.rancher.container.create_agent: "true"
5     io.rancher.container.agent.role: environmentAdmin
6     io.rancher.scheduler.global: "true"
7     {{- if eq .Values.CONSTRAINT_TYPE "required" }}
8     io.rancher.scheduler.affinity:host_label: compute=true
9     {{- end }}
10  command:
11    - kubelet
12    - --kubeconfig=/etc/kubernetes/ssl/kubeconfig
13    - --api_servers=https://kubernetes.kubernetes.rancher.internal
14    - --allow-privileged=true
15    - --register-node=true
16    - --cloud-provider=${CLOUD_PROVIDER}
17    - --healthz-bind-address=0.0.0.0
18    - --cluster-dns=10.43.0.10
19    - --cluster-domain=cluster.local
20    - --network-plugin=cni

```

<https://github.com/rancher/rancher-catalog>

# Rancher k8s-cn

⊕ Add Catalog

Name

library

URL

https://github.com/niusmallnan/rancher-catalog.git

Branch

k8s-cn

<https://github.com/niusmallnan/rancher-catalog>

⚙️ - kubernetes

|          |                              |   |
|----------|------------------------------|---|
| 🏠 Active | addon-starter ⓘ              | Image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3 |
| 🏠 Active | controller-manager ⓘ         | Image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3 |
| 🏠 Active | etcd + 1 Sidekick ⓘ          | Image: rancher/etcd:v2.3.7-11   |
| 🏠 Active | kubectld ⓘ                   | Image: rancher/kubectld:v0.5.5  |
| 🏠 Active | kubelet ⓘ                    | Image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3 |
| 🏠 Active | kubernetes + 1 Sidekick ⓘ    | Image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3 |
| 🏠 Active | proxy ⓘ                      | Image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3 |
| 🏠 Active | rancher-ingress-controller ⓘ | Image: rancher/lb-service-rancher:v0.6.1                                  |
| 🏠 Active | rancher-kubernetes-agent ⓘ   | Image: rancher/kubernetes-agent:v0.5.4                                    |
| 🏠 Active | scheduler ⓘ                  | Image: registry.cn-hangzhou.aliyuncs.com/rancher-cn/k8s:v1.5.4-rancher1-3 |

# 未来支持计划

1. 提供离线安装
2. Network和storage管理
3. 更多本地化的cloudprovider
4. 更人性化的自助打包方式
5. ....

# Demo演示



# Q&A