# Kubernetes微服务实践

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CHAPTER 02

# K8s基础概念和应用

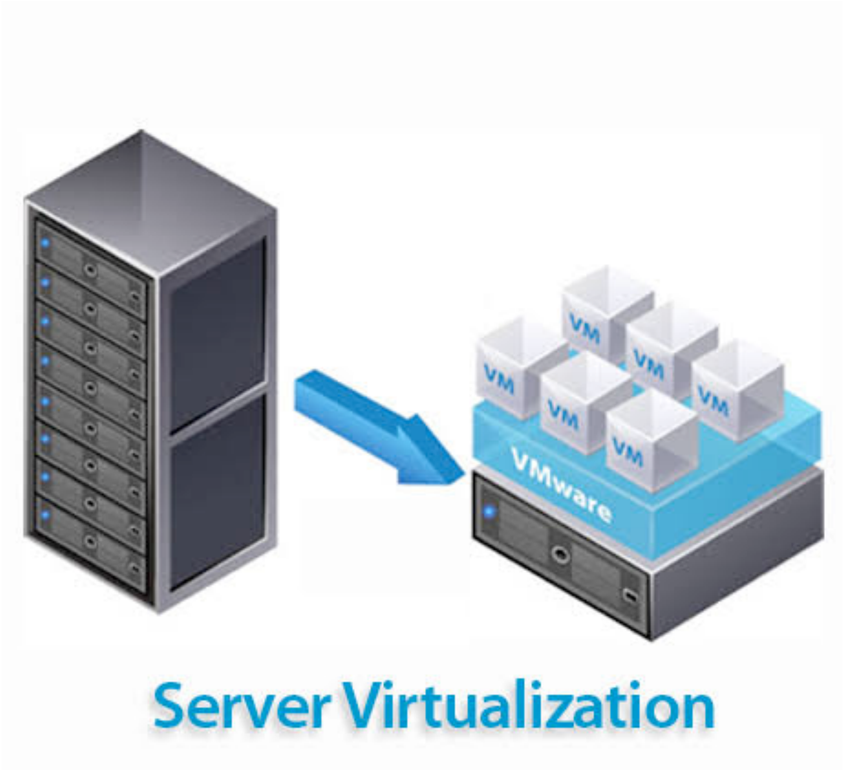
# 第 3 节

# 虚拟机抽象 ~ Pod

# 本课内容

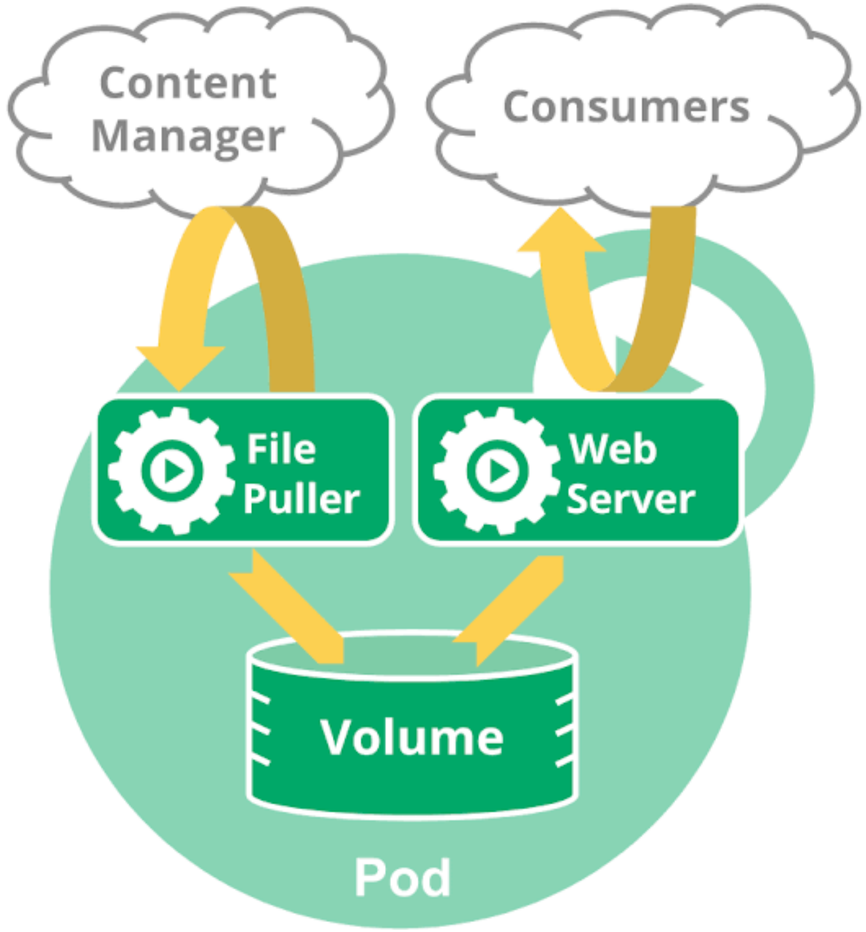
- 理解K8s Pod
- 演示发布Pod
- 如何访问Pod

# 数据中心机房和服务器虚拟化



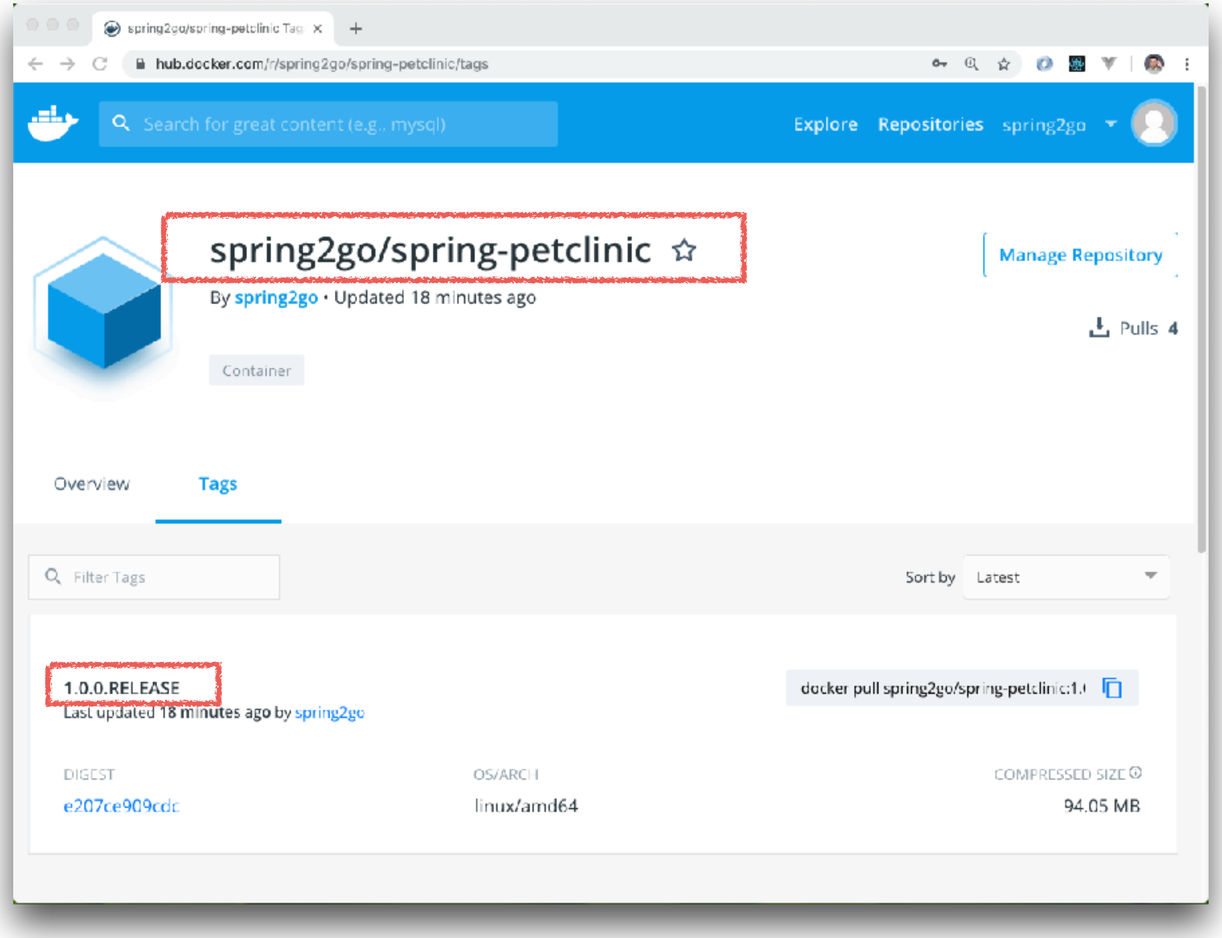
# K8s和Pod


# 多容器Pod




https://kubernetes.io/docs/concepts/workloads/pods/pod/

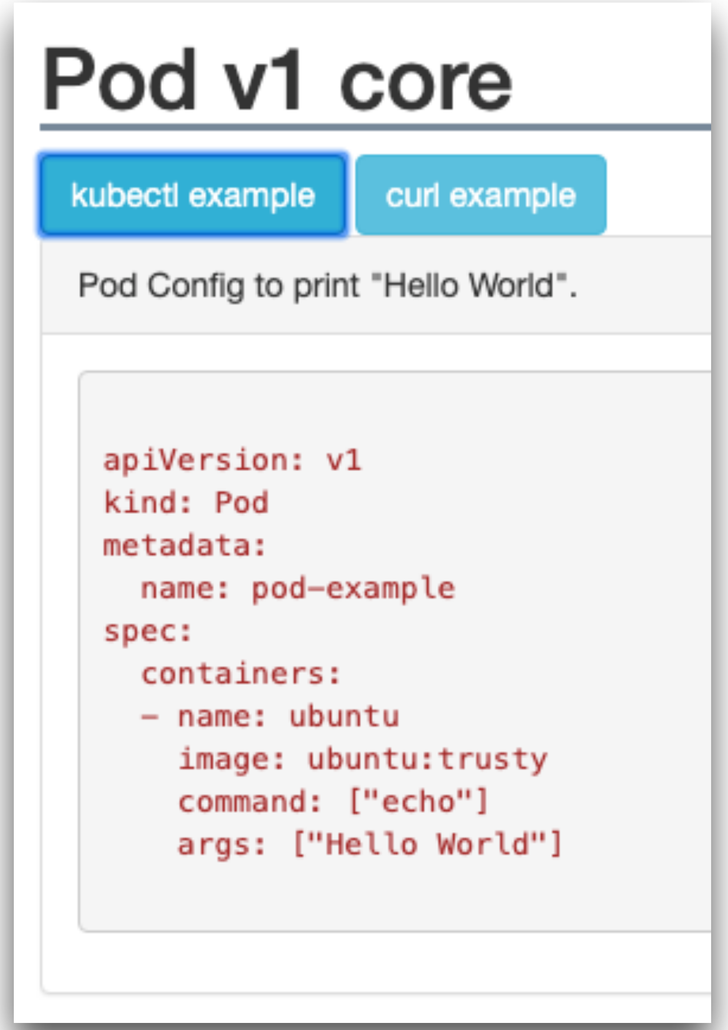
# PetClinic单体镜像




https://hub.docker.com/r/spring2go/spring-petclinic/tags

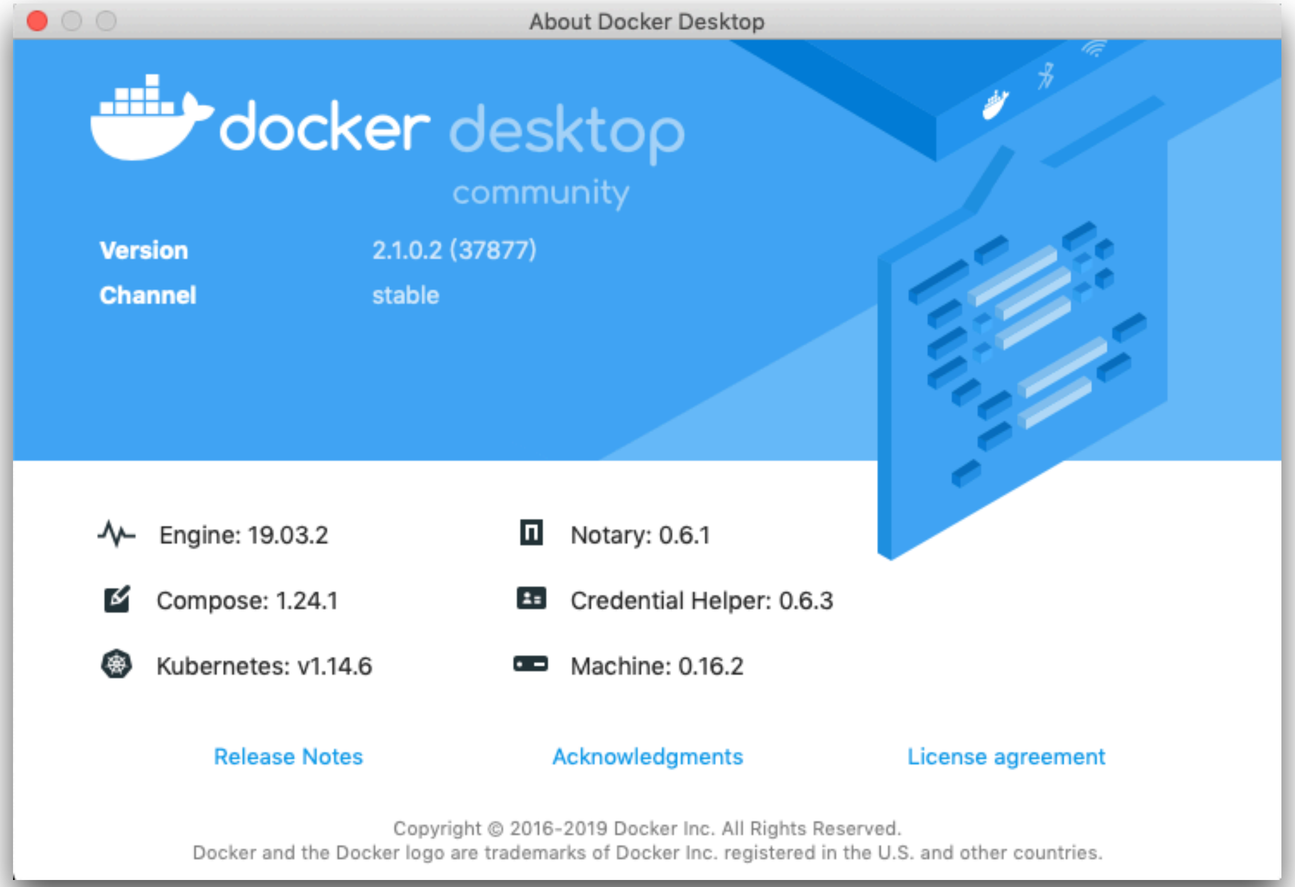
# Pod发布规范

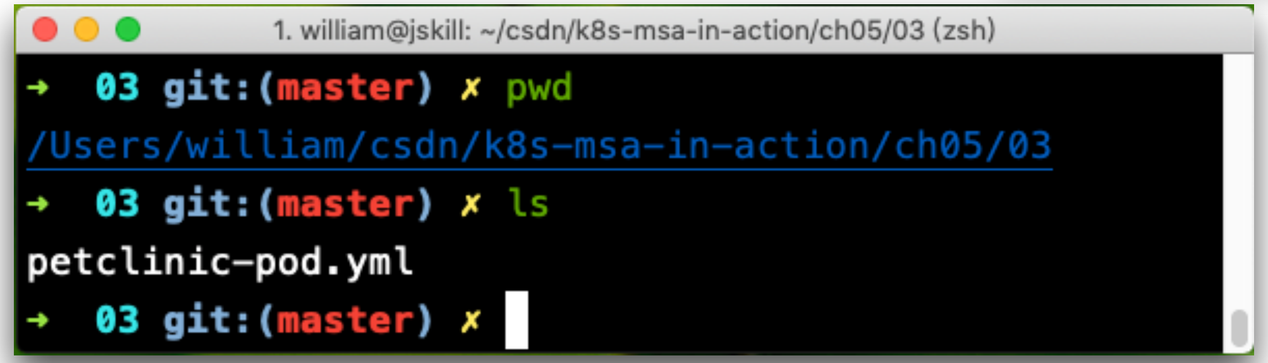
```yaml
apiVersion: v1
kind: Pod
metadata:
  name: petclinic
spec:
  containers:
    - name: petclinic
      image: spring2go/spring-petclinic:1.0.0.RELEASE
```



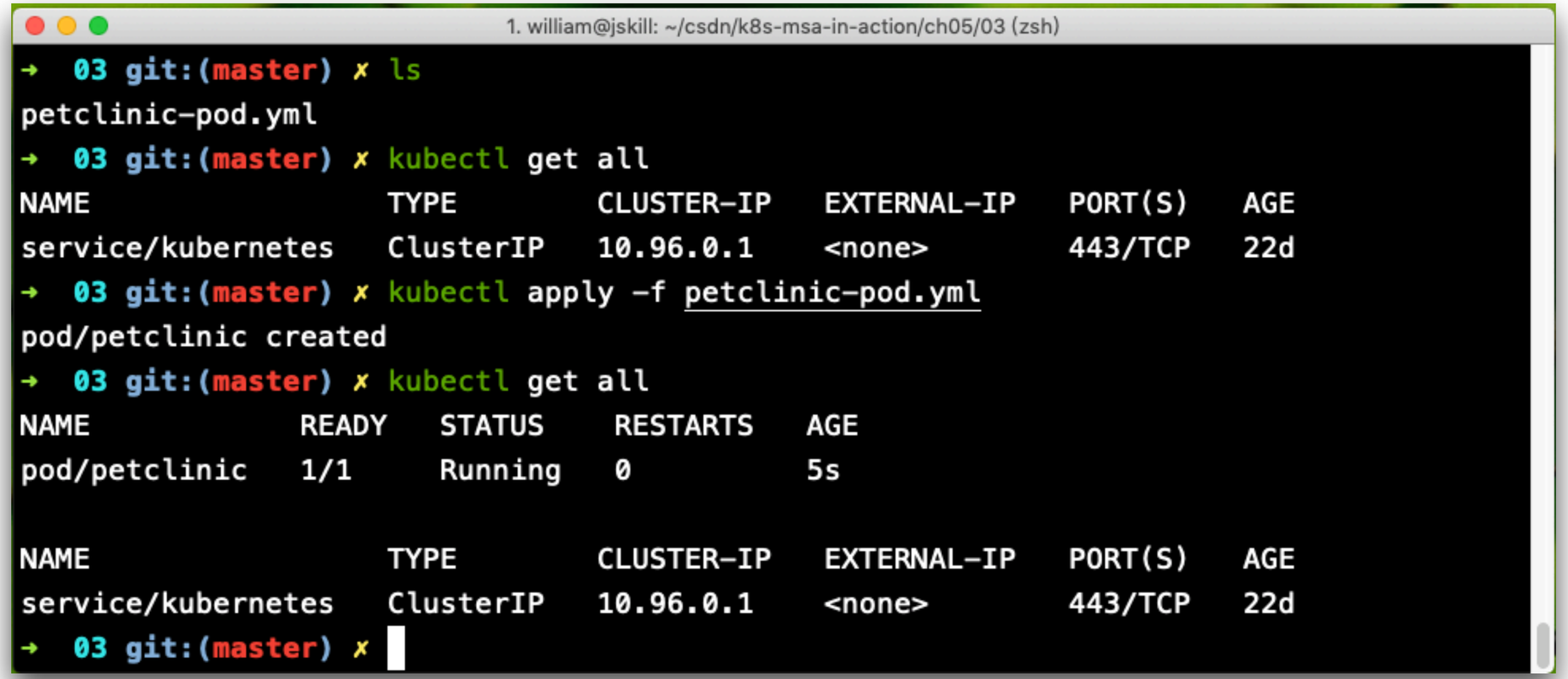

https://kubernetes.io/docs/reference/generated/kubernetes-api/v1.14/#pod-v1-core

# 创建目录和发布文件

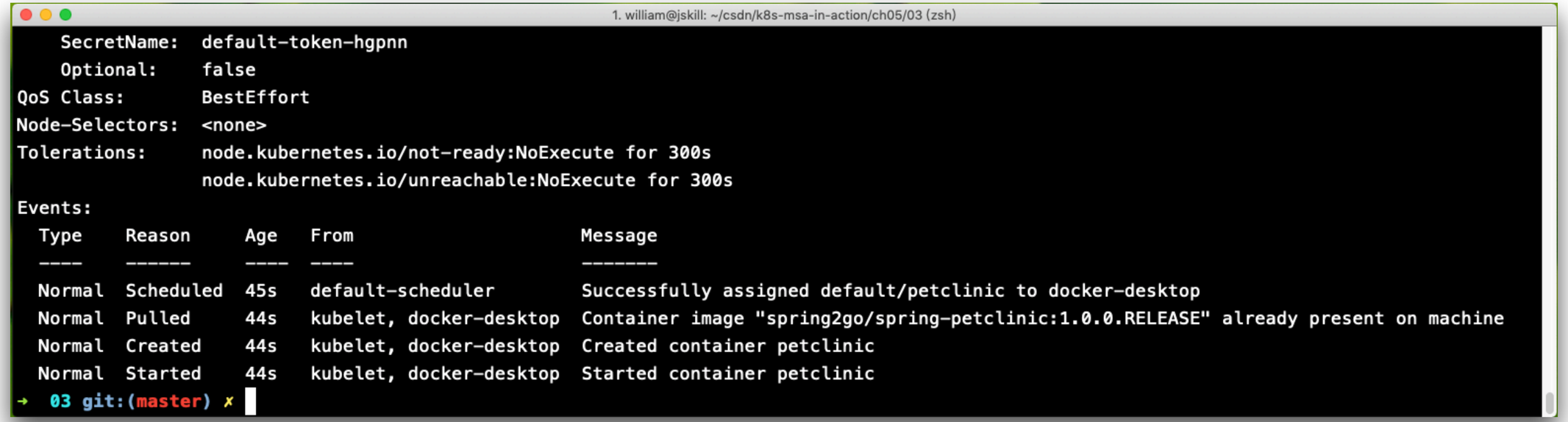

About Docker Desktop
docker desktop
community
Version 2.1.0.2 (37877)
Channel stable
Engine: 19.03.2
Notary: 0.6.1
Compose: 1.24.1
Credential Helper: 0.6.3
Kubernetes: v1.14.6
Machine: 0.16.2
Release Notes
Acknowledgments
License agreement
Copyright © 2016-2019 Docker Inc. All Rights Reserved.
Docker and the Docker logo are trademarks of Docker Inc. registered in the U.S. and other countries.


1. william@jskill: ~/csdn/k8s-msa-in-action/ch05/03 (zsh)
→ 03 git:(master) ✗ pwd
/Users/william/csdn/k8s-msa-in-action/ch05/03
→ 03 git:(master) ✗ ls
petclinic-pod.yml
→ 03 git:(master) ✗

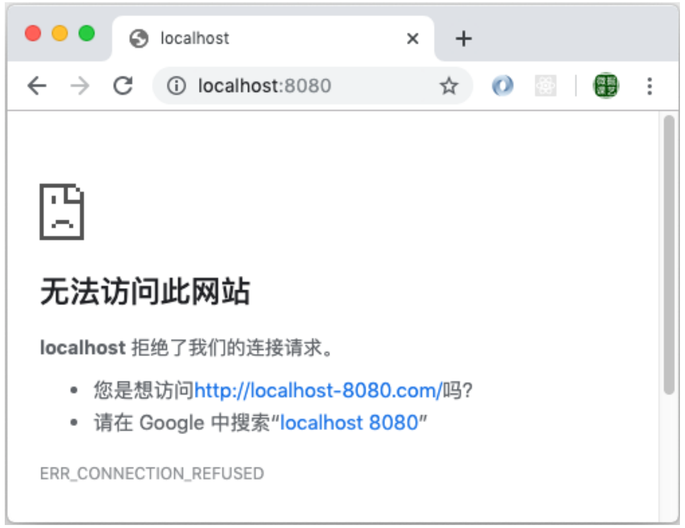
# 发布Petclinic Pod

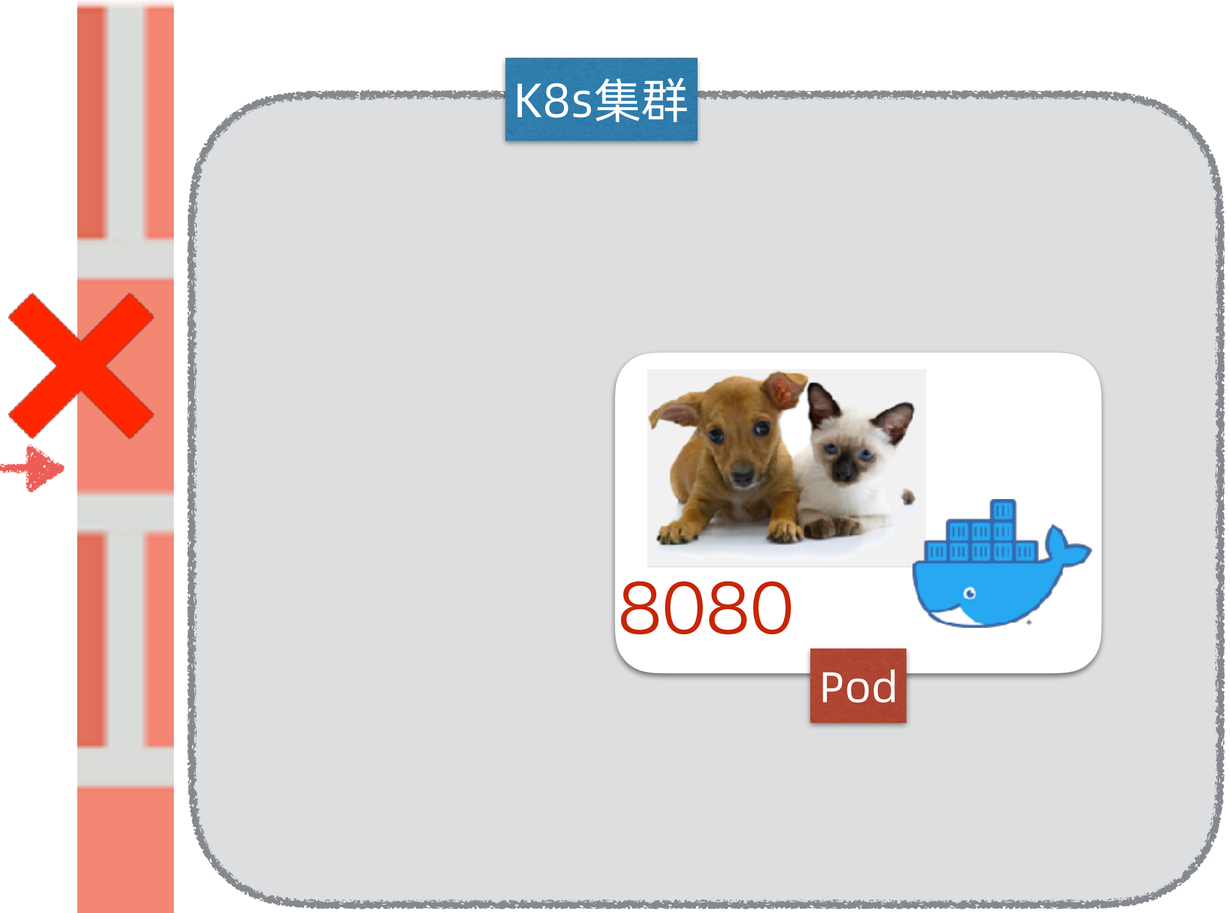


# 查询Pod资源状况


1. william@jskill: ~/csdn/k8s-msa-in-action/ch05/03 (zsh)
SecretName: default-token-hgpnn
Optional: false
QoS Class: BestEffort
Node-Selectors: <none>
Tolerations: node.kubernetes.io/not-ready:NoExecute for 300s
node.kubernetes.io/unreachable:NoExecute for 300s
Events:
Type Reason Age From Message
Normal Scheduled 45s default-scheduler Successfully assigned default/petclinic to docker-desktop
Normal Pulled 44s kubelet, docker-desktop Container image "spring2go/spring-petclinic:1.0.0.RELEASE" already present on machine
Normal Created 44s kubelet, docker-desktop Created container petclinic
Normal Started 44s kubelet, docker-desktop Started container petclinic
→ 03 git:(master) ✗

# 如何访问Pod?

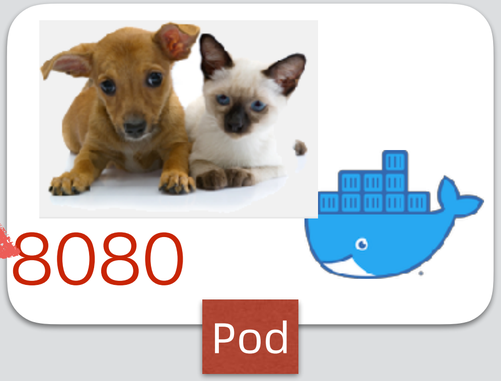

localhost
localhost:8080
无法访问此网站
localhost 拒绝了我们的连接请求。
您是想访问http://localhost-8080.com/吗?
请在 Google 中搜索"localhost 8080"
ERR_CONNECTION_REFUSED


K8s集群
8080
Pod

# 端口转发(Port-Forward)

8080

K8s集群

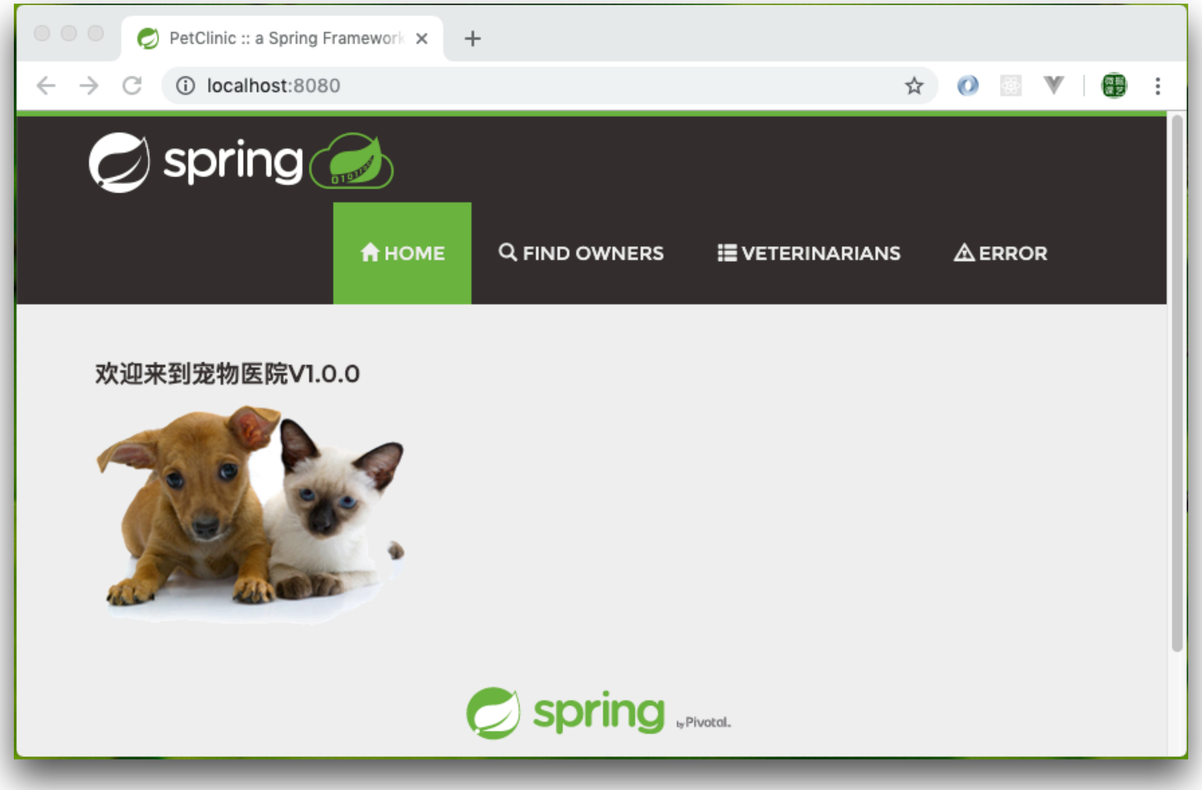


8080

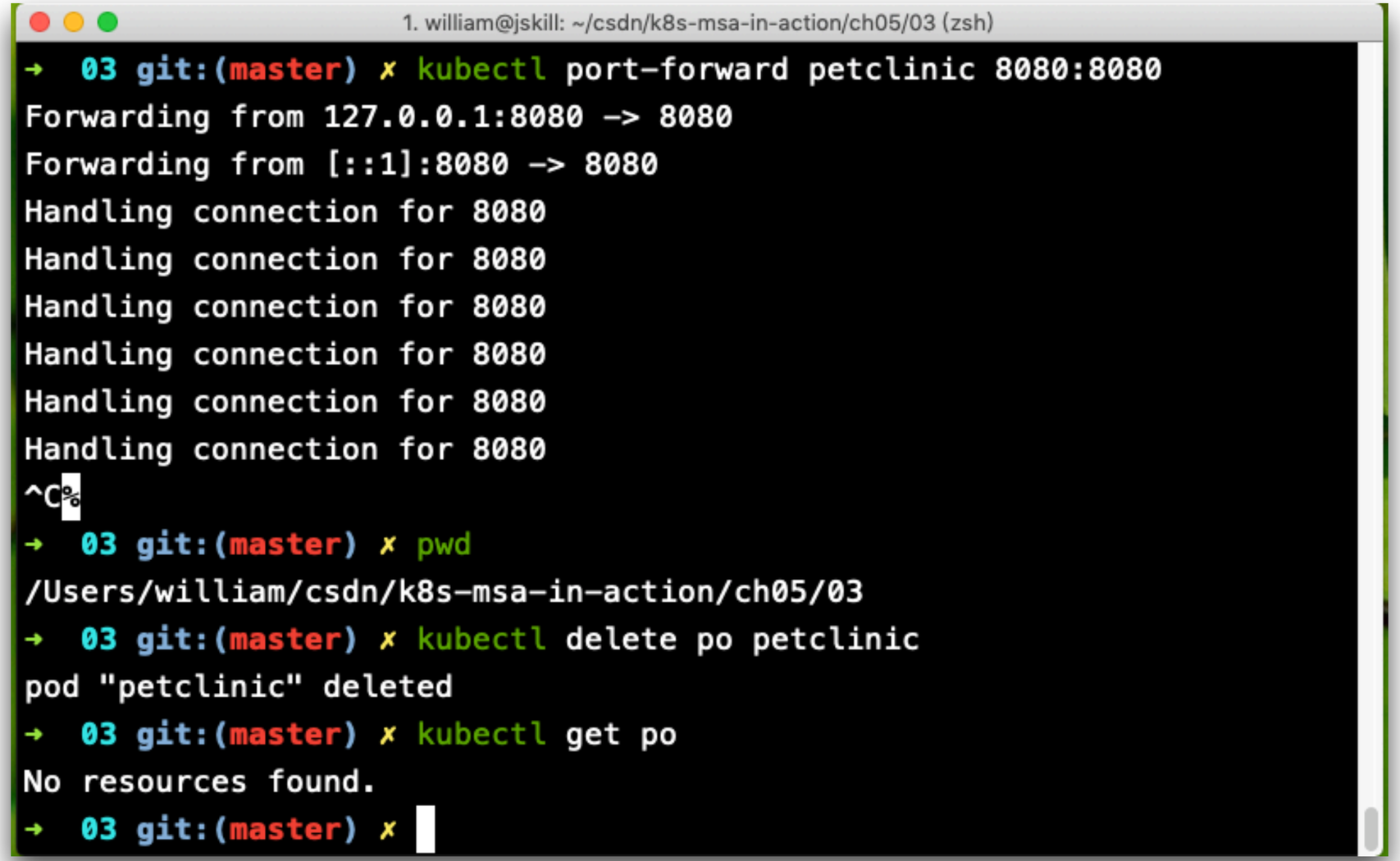
Pod

```
1. kubectl port-forward petclinic 8080:8080 (kubectl)
etclinic
→  03 git:(master) ✗ kubectl get po
NAME        READY   STATUS    RESTARTS   AGE
petclinic   1/1     Running   0          81s
→  03 git:(master) ✗ kubectl port-forward petclinic 8080:8080
Forwarding from 127.0.0.1:8080 -> 8080
Forwarding from [::1]:8080 -> 8080
```

# Petclinic应用成功运行



# 清理环境


1. william@jskill: ~/csdn/k8s-msa-in-action/ch05/03 (zsh)
→ 03 git:(master) ✗ kubectl port-forward petclinic 8080:8080
Forwarding from 127.0.0.1:8080 -> 8080
Forwarding from [::1]:8080 -> 8080
Handling connection for 8080
Handling connection for 8080
Handling connection for 8080
Handling connection for 8080
Handling connection for 8080
Handling connection for 8080
^C%
→ 03 git:(master) ✗ pwd
/Users/william/csdn/k8s-msa-in-action/ch05/03
→ 03 git:(master) ✗ kubectl delete po petclinic
pod "petclinic" deleted
→ 03 git:(master) ✗ kubectl get po
No resources found.
→ 03 git:(master) ✗

# 本课小结


- Pod是K8s云平台中的虚拟机资源
- Pod发布规范
  - kind -> Pod
  - spec -> 容器镜像
- 通过Port-Forward可本机访问Pod