Rancher 2.1新功能演示分享

RANCHER

Rancher Labs • 2018-11

大纲

- Windows 节点支持
- Rancher HA支持
- Rancher 集群清理工具

Windows 节点支持

Windows容器介绍以及使用注意事项

参考文档： https://docs.microsoft.com/en-us/virtualization/windowscontainers/about/

注意事项：

1. Windows上可以运行Linux-base容器以及Windows-base容器，但不能同时兼容，Linux容器只支持hyper-v隔离模式，Windows-base容器支持共享内核以及hyber-v隔离模式
2. Windows-base容器与Linux-base容器无法兼容，Windows Server 2016, Windows Server 1709以及Windows Server 1803+容器具有各自单独的基础镜像，容器无法向下兼容，向上兼容只能使用hyper-v隔离模式运行

- Windows的容器是什么
- Windows基础镜像列表
- Windows容器运行时
- Windows容器隔离类型
- Windows Server的版本及其兼容性
- Windows Kubernetes 集群架构

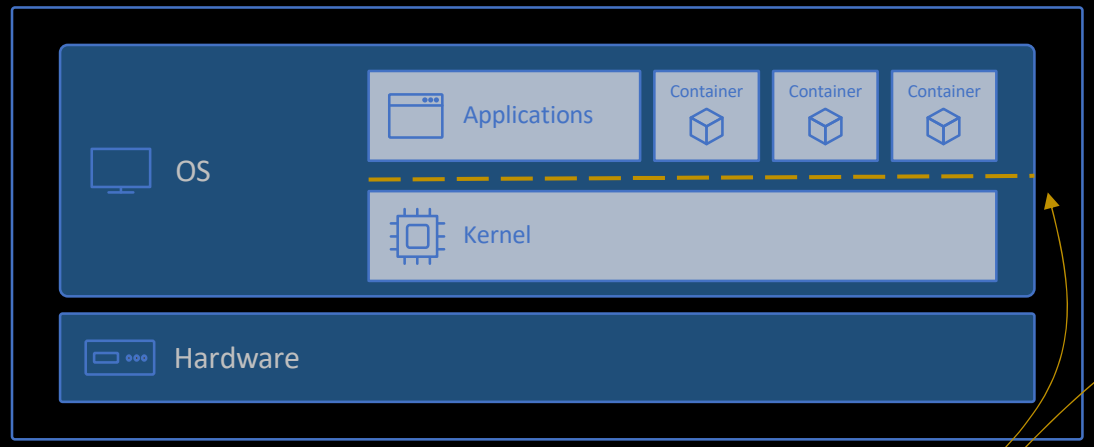
- Windows的容器是什么
- Windows基础镜像列表
- Windows容器运行时
- Windows容器隔离类型
- Windows Server的版本及其兼容性
- Windows Kubernetes 集群架构

以下页面摘自KubeCon China演讲PPT

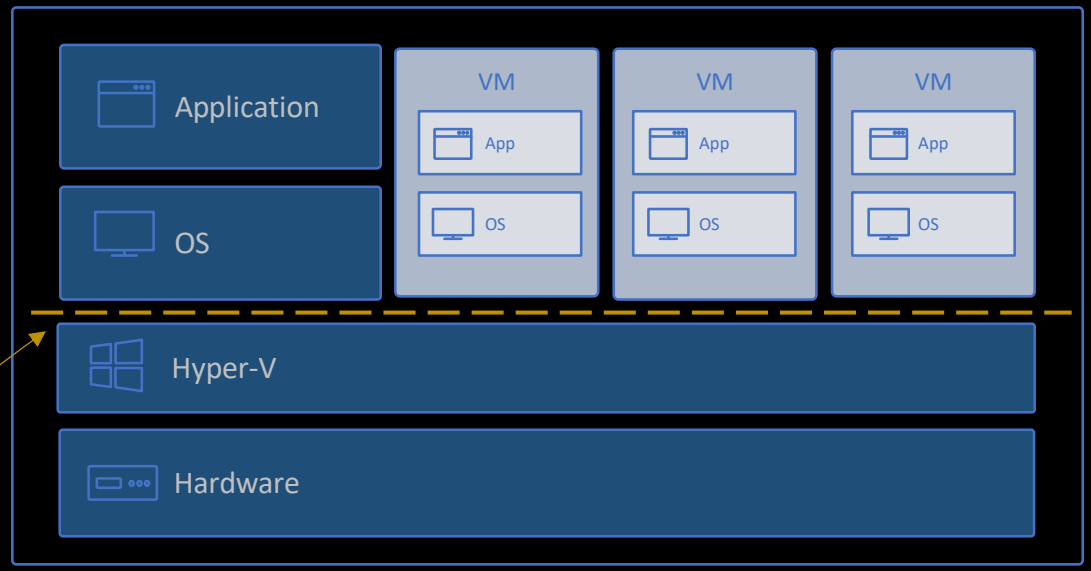
Windows容器是什么

KubeCon | CloudNativeCon China 2018

容器 = 操作系统虚拟化



传统虚拟机 =硬件虚拟化



虚拟化边界

© KubeCon 2018 ShangHai China

Windows基础镜像列表

KubeCon | CloudNativeCon

China 2018

nanoserver

windowsservercore

Windows

windowsservercore-insider
nanoserver-insider
windows-insider

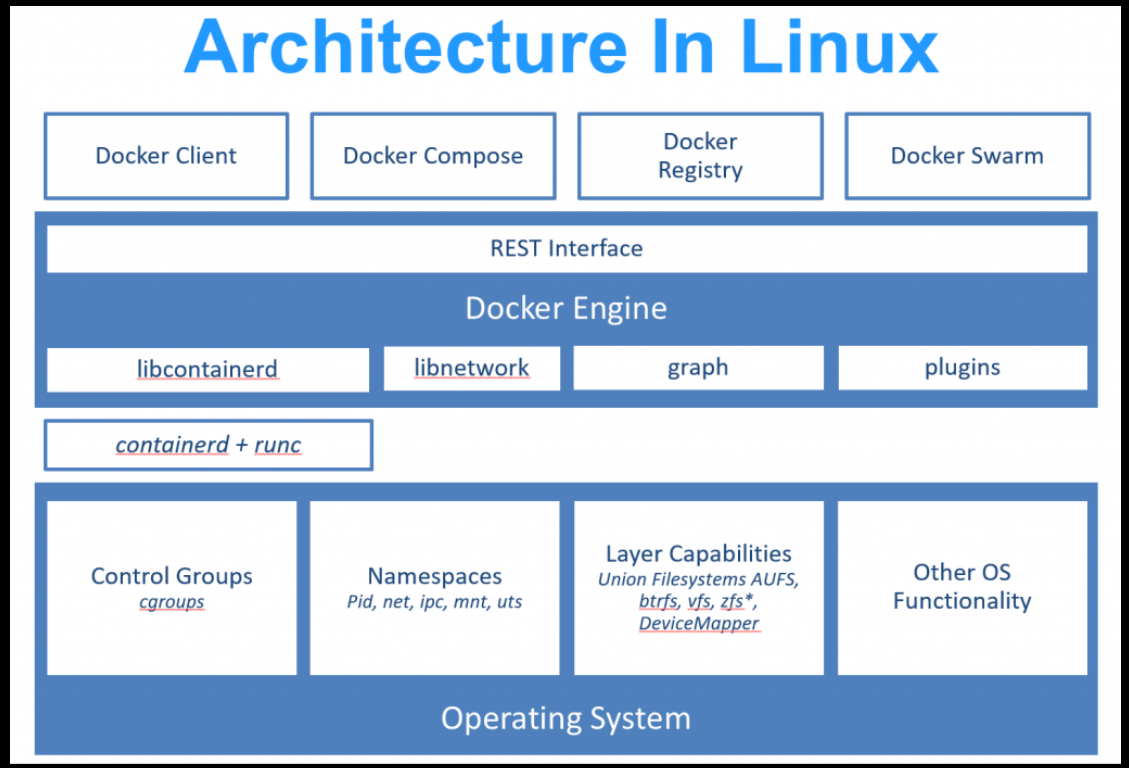
1 用0 开发3 测试

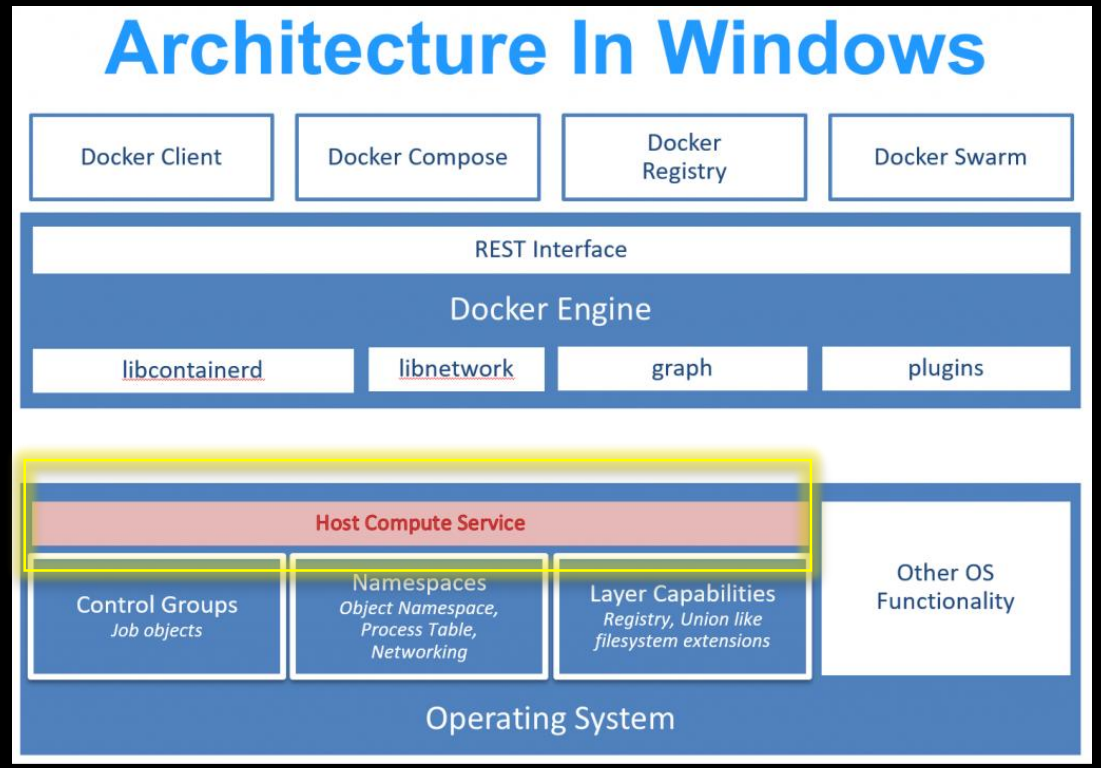
新的repo

microsoft// indo/ sser. ercore:1803 ⟹ mcr.microsoft.com// indo/ s/nanoser. er:1803

© KubeCon 2018 ShangHai China

Windows容器运行时





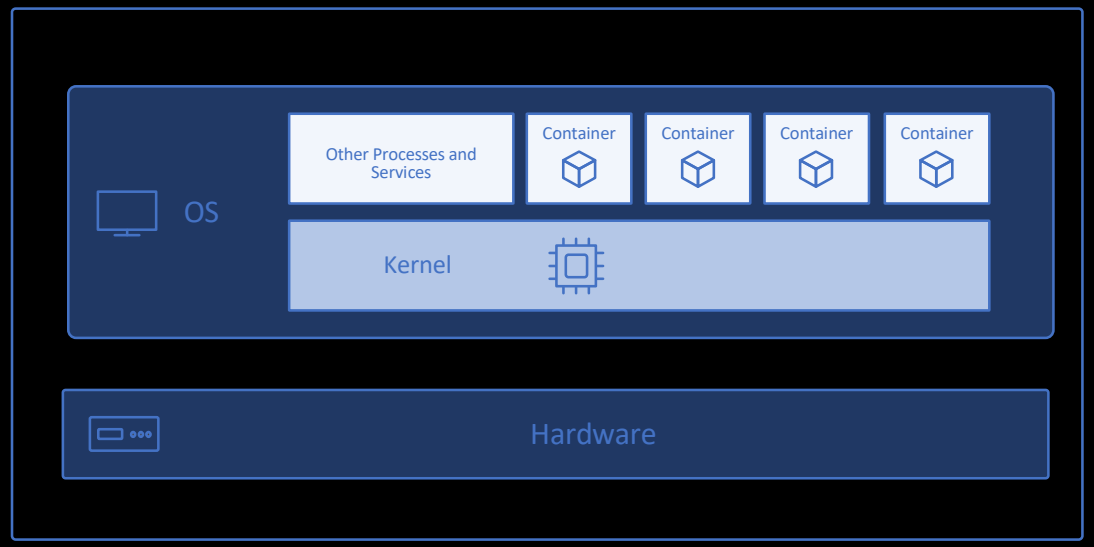
© KubeCon 2018 ShangHai China

OWS容器隔离类型

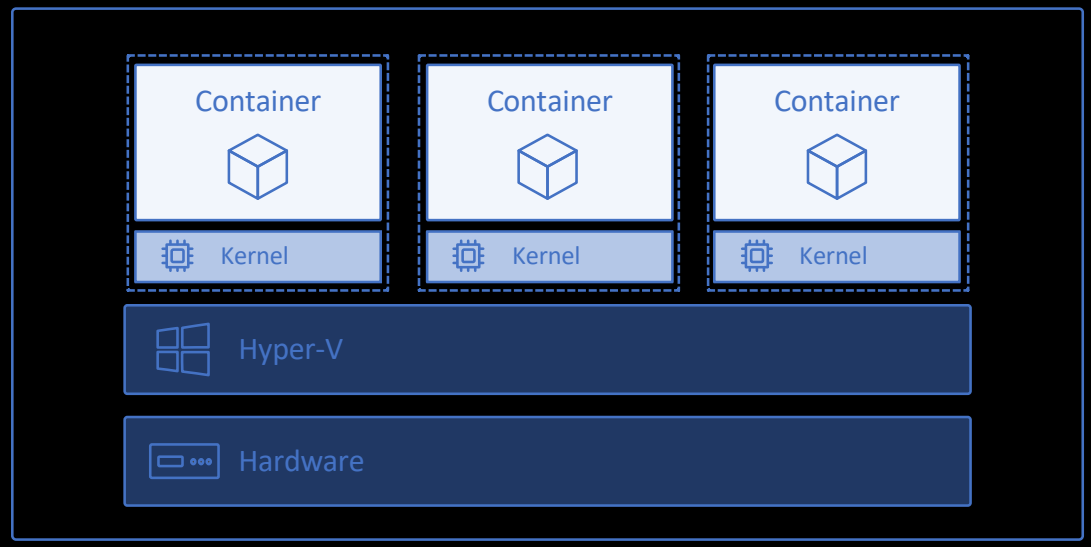
KubeCon | CloudNativeCon China 2018

experimental.windows.kubernetes.io/isolation-

进程– 离 共享内核



Hyper-V – 离 独立内核



不同的版本支持数量不一样，详情可以看：
https://www.thomas-krenn.com/en/wiki/Windows_Server_2016_Editions_comparison

© KubeCon 2018 ShangHai China

Windows Server 版本及兼容性

KubeCon | CloudNativeCon China 2018

LTS

Optimized container images for Nano Server and Server Core

Platform level support for Linux containers

Windows Subsystem for Linux

Networking enhancements for overlays and SDN

SA

Optimized Server Core image

App compat improvements

Native command line tools – curl.exe, tar.exe and SSH

Enhancements to the Windows Subsystem for Linux

Networking enhancements for greater density and quicker endpoint creation

Improved network security with Calico Open source storage plugins for Kubernetes

Platform functionality required for Kubernetes conformance

SA

LTS

Optimized Server Core image

App compat improvements

Enhanced Group Managed Service Account support

Platform functionality for Kubernetes and Microsoft Service Fabric

Performance and density improvements

Platform and open source work on CNI networking plugins such as Calico and Flannel

Enhancements to the Windows Subsystem for Linux

© KubeCon 2018 ShangHai China

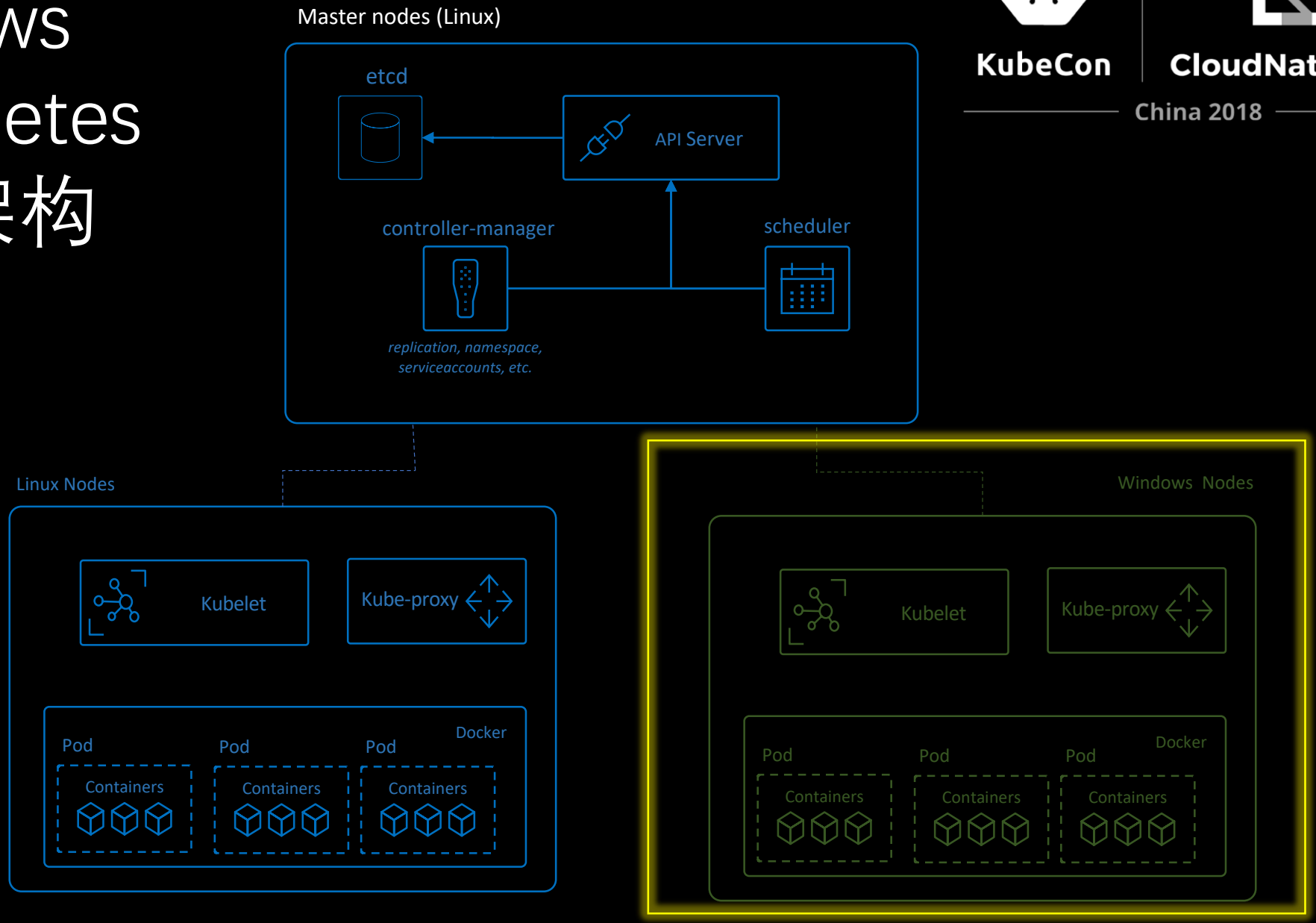
Windows Server 版本及兼容性

KubeCon | CloudNativeCon China 2018

C98t1684r V4rs698	H9st OS V4rs698			
	0 6839ws S4rv4r 2 16 Bu63s: 14393	0 6839ws S4rv4r 17 9 Bu63s 16299	0 6839ws S4rv4r 18 3 Bu63s 17134	0 6839ws S4rv4r 2 19 Bu63s 17763
0 6839ws S4rv4r 2 16	B9th Hy:4r-V 183 -r924ss Is9t1t698	Hy:4r-V Is971t698 987y	Hy:4r-V Is971t698 987y	Hy:4r-V Is971t698 987y
0 6839ws S4rv4r 17 9	N9t su::9rt43	B9th Hy:4r-V 183 -r924ss Is9t1t698	Hy:4r-V Is971t698 987y	Hy:4r-V Is971t698 987y
0 6839ws S4rv4r 18 3	N9t su::9rt43	N9t su::9rt43	B9th Hy:4r-V 183 -r924ss Is9t1t698	Hy:4r-V Is971t698 987y
0 6839ws S4rv4r 18 9	N9t su::9rt43	N9t su::9rt43	N9t su::9rt43	B9th Hy:4r-V 183 -r924ss Is9t1t698

© KubeCon 2018 ShangHai China

Windows Kubernetes 集群 架构



KubeCon | CloudNativeCon
China 2018

以上页面摘自KubeCon China演讲PPT

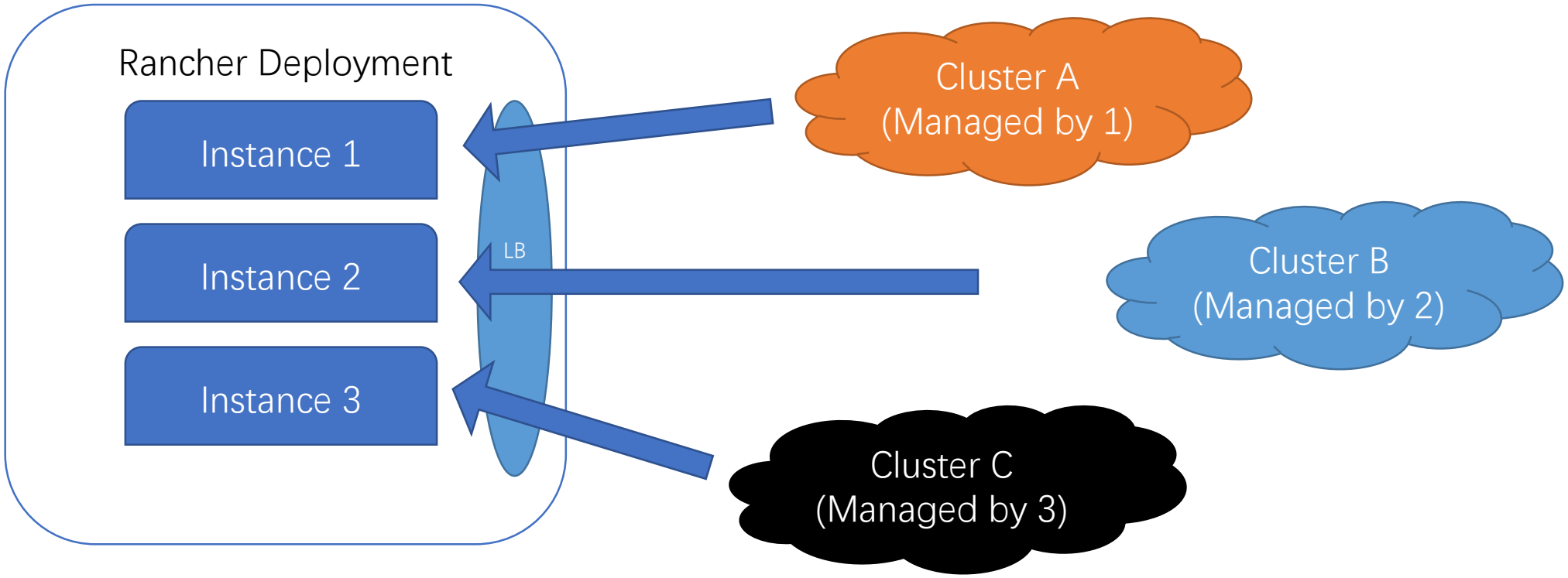
Windows 节点支持

在Rancher2.1中部署Windows节点， Demo

参考文档： https://rancher.com/docs/rancher/v2.x/en/cluster-provisioning/rke-clusters/windows-clusters/

Rancher HA支持

Rancher 2.1升级后支持多Rancher实例的HA模式，支持横向扩展



Rancher HA支持

HA Setup Demo

注意事项：

1. Rancher v2.1后只支持使用helm安装方式
2. Rancher v2.0.x 非Helm安装版本升级到v2.1.x需要参考我们的升级教程 https://rancher.com/docs/rancher/v2.x/en/upgrades/upgrades/migrating-from-rke-add-on/

Rancher 集群清理工具

Demo

参考文档 https://rancher.com/docs/rancher/v2.x/en/admin-settings/removing-rancher/rancher-cluster-nodes/

Thank you