

如何统一纳管多基础架构上的K8S集群



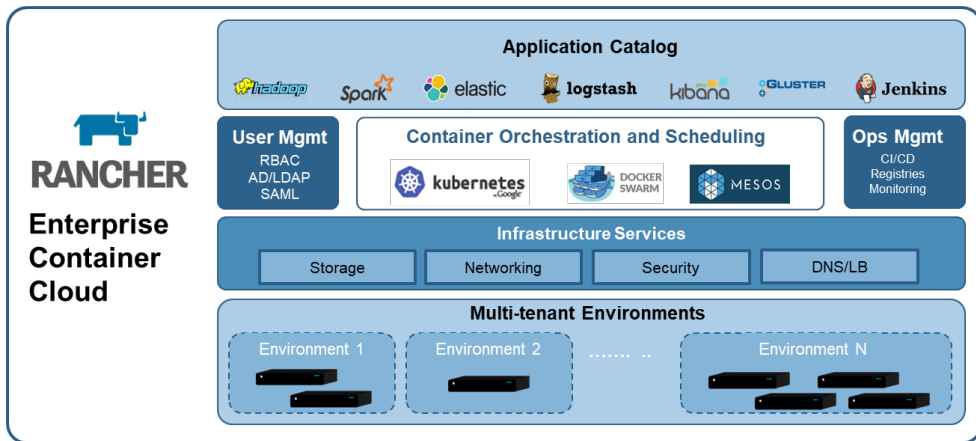
December 23th, 2017

Agenda













- Rancher 1.x & Kubernetes
- Rancher 2.0 Architecture & Features
- Demo

Rancher 1.x

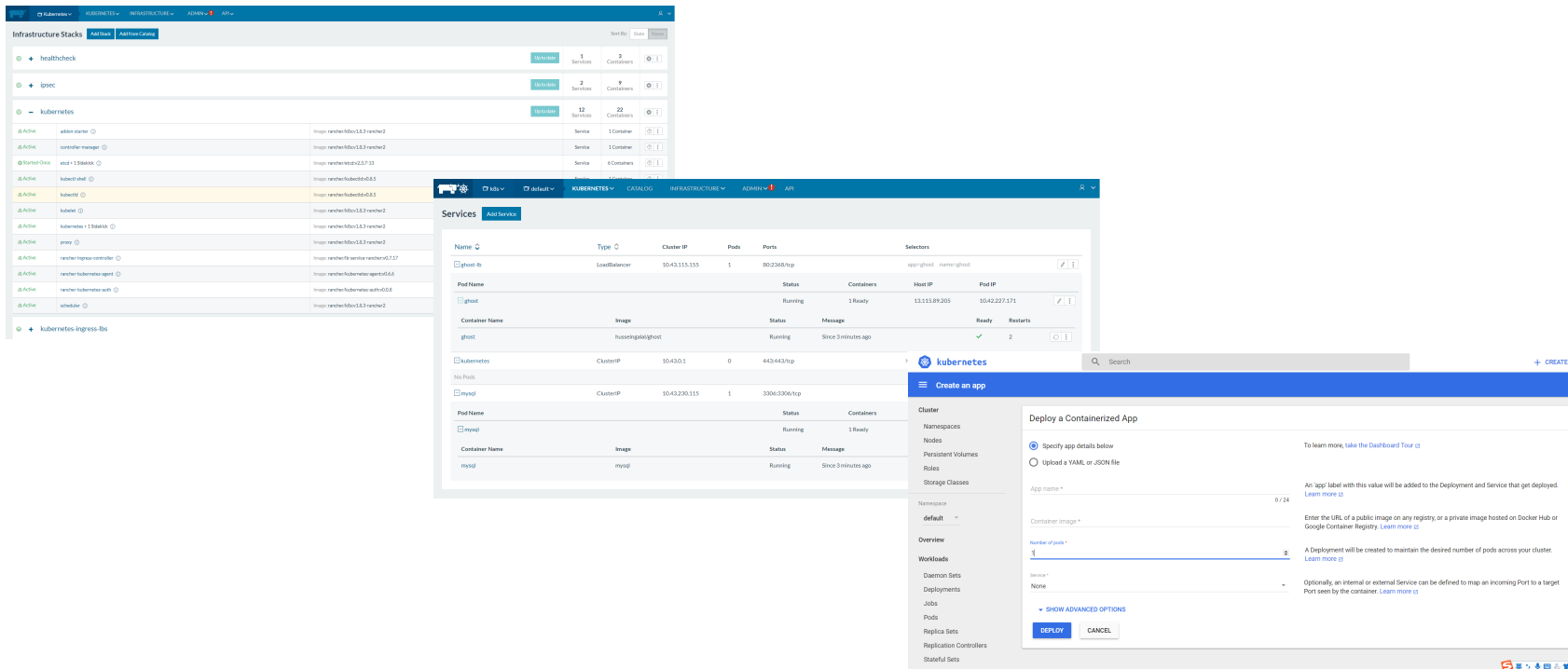
- Based on docker and docker-compose, simple and Intuitive
- Overlay networking, multi-cloud environments, health checking, load balancing, storage volume drivers, scheduling, and other features



Kubernetes in Rancher

 Active	addon-starter ⓘ	Image: registry.cn-shenzhen.aliyuncs.com/rancher_cn/k8s:v1.7.2-rancher7
 Active	controller-manager ⓘ	Image: registry.cn-shenzhen.aliyuncs.com/rancher_cn/k8s:v1.7.2-rancher7
 Active	etcd + 1 Sidekick ⓘ	Image: rancher/etcd:v2.3.7-13
 Active	kubectl-shell ⓘ	Image: rancher/kubectld:v0.8.2
 Active	kubectld ⓘ	Image: rancher/kubectld:v0.8.2
 Active	kubelet ⓘ	Image: registry.cn-shenzhen.aliyuncs.com/rancher_cn/k8s:v1.7.2-rancher7
 Active	kubernetes + 1 Sidekick ⓘ	Image: registry.cn-shenzhen.aliyuncs.com/rancher_cn/k8s:v1.7.2-rancher7
 Active	proxy ⓘ	Image: registry.cn-shenzhen.aliyuncs.com/rancher_cn/k8s:v1.7.2-rancher7
 Active	rancher-ingress-controller ⓘ	Image: rancher/lb-service-rancher:v0.7.8
 Active	rancher-kubernetes-agent ⓘ Agent responsible for handling communications between Rancher and Kubernetes.	Image: rancher/kubernetes-agent:v0.6.3
 Active	rancher-kubernetes-auth ⓘ Small service that bridges authentication between Rancher and Kubernetes.	Image: rancher/kubernetes-auth:v0.0.7
 Active	scheduler ⓘ	Image: registry.cn-shenzhen.aliyuncs.com/rancher_cn/k8s:v1.7.2-rancher7

Rancher 1.x & Kubernetes



The screenshot displays the Rancher management interface. On the left, the 'Infrastructure Stacks' sidebar shows a tree view with 'kubernetes' expanded, listing various system services like 'addon-starter', 'controller-manager', 'etcd', 'kubelet', 'kube-proxy', 'scheduler', and 'ingress-nginx'. The main panel shows the 'Services' configuration for 'kubelet'. It includes a table of pods and containers, and a 'Deploy a Containerized App' form on the right.

Name	Type	Cluster IP	Pods	Ports	Selectors
ghost-lb	LoadBalancer	10.43.115.155	1	802356/http	app=ghost, name=ghost
ghost	Running	11.115.89.205	1 Ready	10.42.227.171	
ghost	Container Name	Image	Status	Message	Ready Restarts
ghost	ghost	huseknap/ghost	Running	Since 3 minutes ago	✓ 2

ClusterIP	Pods
10.43.0.1	0
10.42.230.115	1

Pod Name	Status	Containers
myjsd	Running	1 Ready
myjsd	Running	Since 3 minutes ago

Deploy a Containerized App

Specify app details below

Upload a YAML or JSON file

App name * 0 / 24

Container image *

Number of pods * 1

Service * None

Rancher 2.0

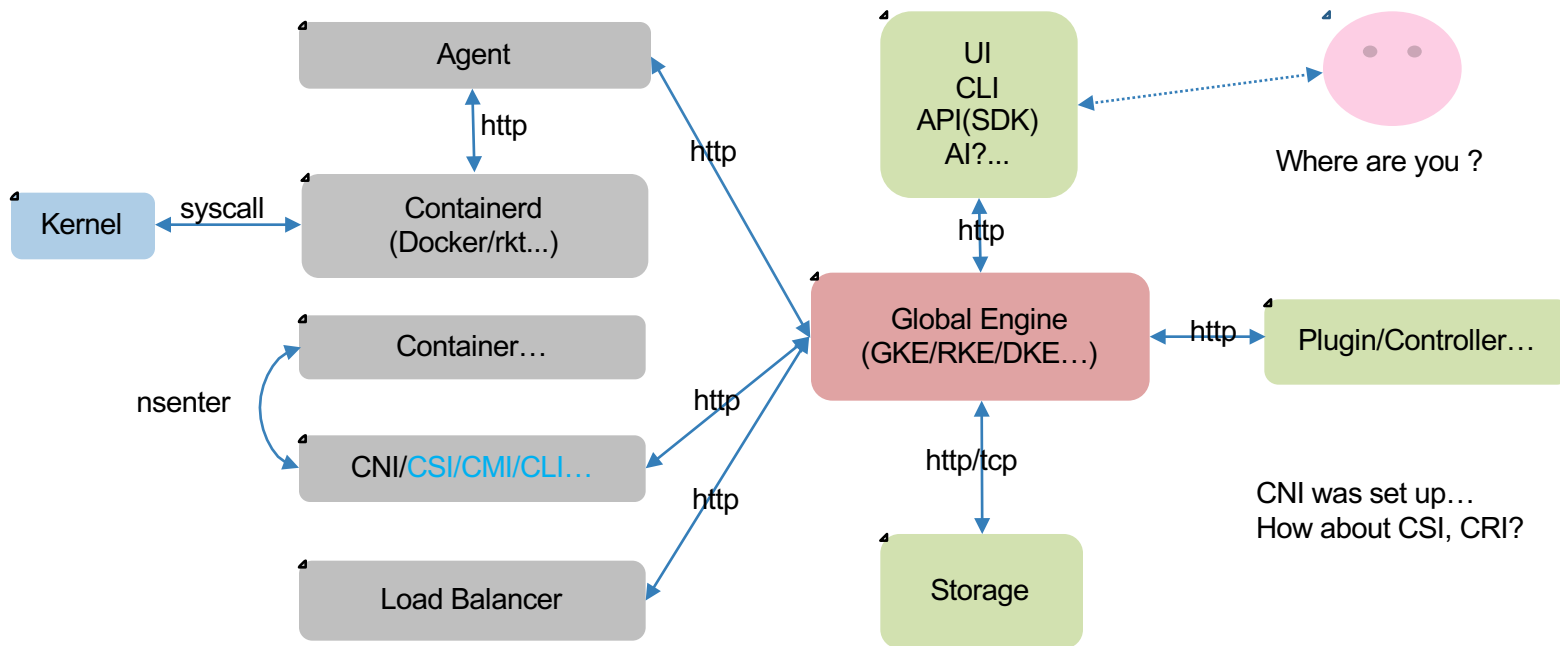
- Based on Kubernetes with compose support
- Features along with Kubernetes

The screenshot shows the Rancher 2.0 web interface for adding a container. The top navigation bar includes 'Containers', 'Hosts', 'Apps', 'Resources', and 'Admin'. The main content area is titled 'Add Container' and contains several sections:

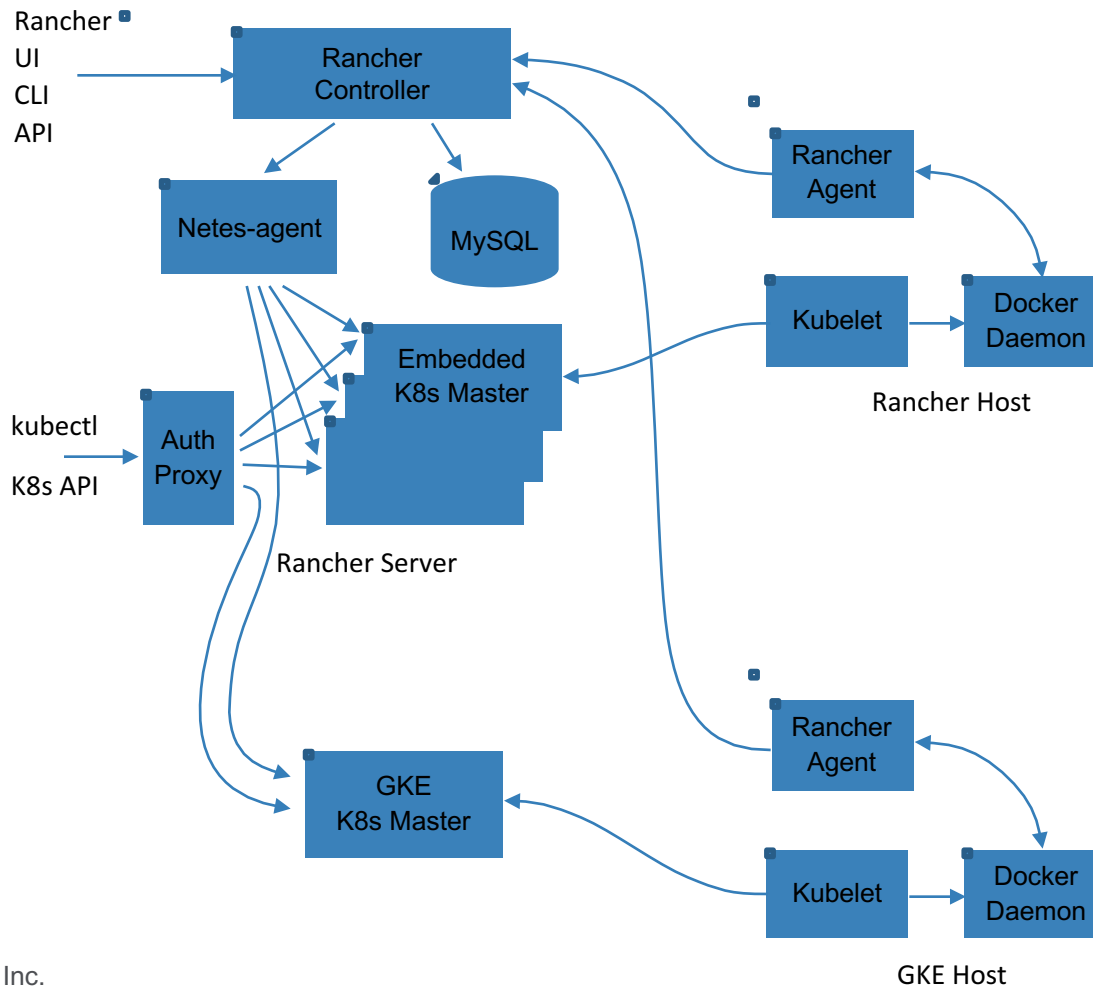
- Name:** A text input field containing 'e.g. myapp' and a link 'Add a Description'.
- Scale:** A list of radio buttons for deployment modes: 'Standalone container' (selected), 'Service with a scale of 1 container', 'Global service with a scale of 1 container per host', and 'Sidekick: Match the scale and scheduling of a service'.
- Docker Image:** A dropdown menu showing 'ubuntu:xenial'.
- Stack:** A dropdown menu showing 'Default'.
- Port Mapping:** A button '+ Add Port'.
- Environment Variables:** A button '+ Add Variable'.
- Host Scheduling:** A section with a dropdown arrow, description 'Configure what hosts the containers can be deployed to.', and status 'No Rules'.
- Health Check:** A section with a dropdown arrow, description 'Periodically make a request to the container to see if it is responding correctly. Unhealthy containers are excluded from Load Balancers and Service Discovery.', and status 'Not Configured'.

At the bottom right, there are 'Launch' and 'Cancel' buttons, and a link 'Show advanced options'.

CAAS



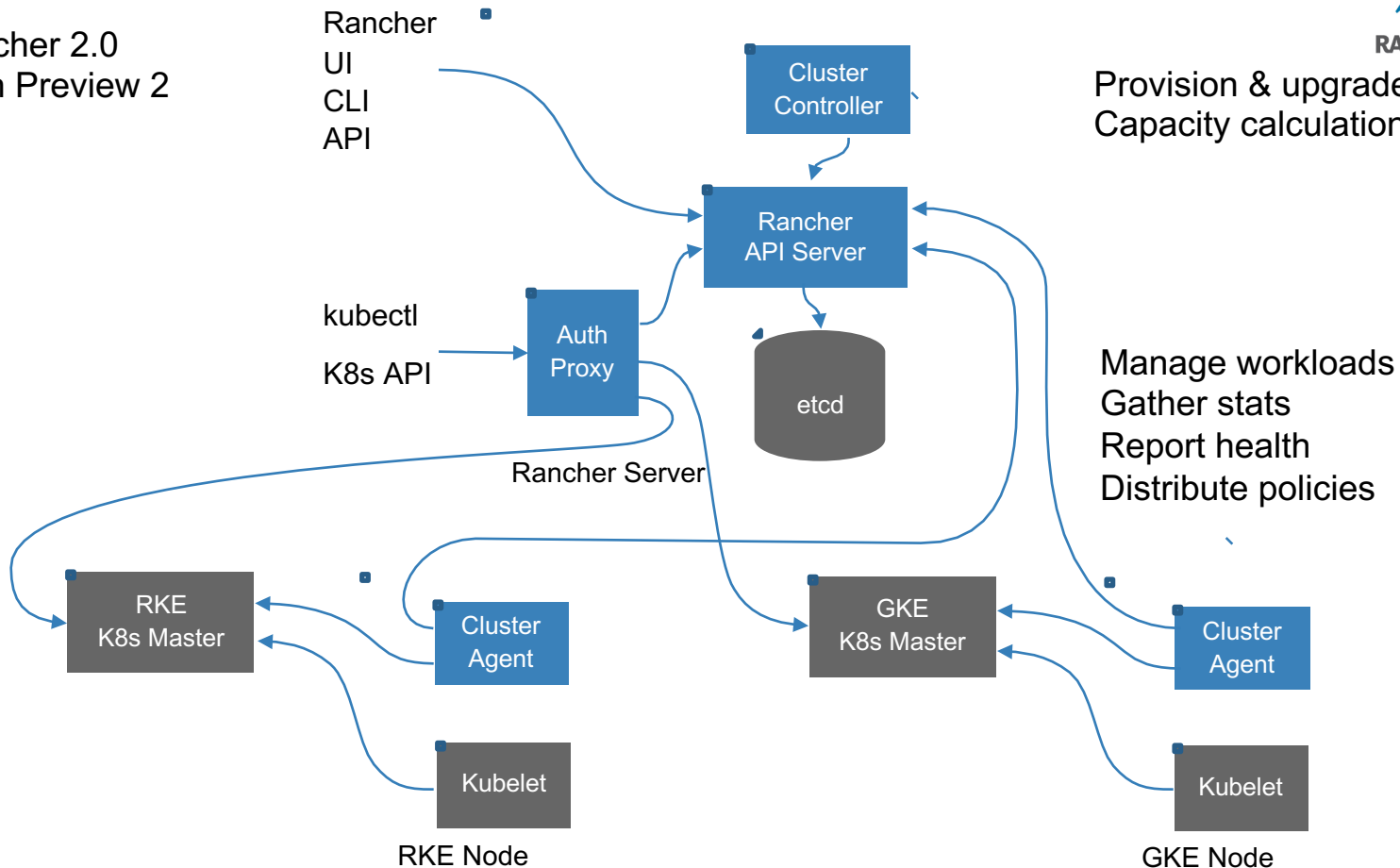
Rancher 2.0 Tech Preview 1



Feedback from Tech Preview 1

- Like: the capabilities brought by Kubernetes: RBAC, shared host environments, storage and networking plugins, ...
- Like: the ability to import Kubernetes clusters
- Don't like: running Kubernetes on mysql

Rancher 2.0 Tech Preview 2



Rancher Kubernetes Engine (RKE)

- Simple, fast, works anywhere
 - Kops – deep cloud integration
 - Kubespray – RKE is built on containers and is simpler and faster
- Install/maintain/upgrade from a single cluster.yml file
- Easily embeddable into third-party apps

DEMO

Thank you

