

# 1 Rancher CheatSheet

# KUBERNETES

- PDF Link: [cheatsheet-rancher-A4.pdf](#), Category: kubernetes
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-rancher-A4>
- Related posts: [OpenShift CheatSheet](#), [PKS CheatSheet](#), [#denny-cheatsheets](#)

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## 1.1 Rancher Summary

Name	Command
Setup rancher in vagrant	GitHub: <a href="#">quickstart/vagrant</a> , <a href="https://172.22.101.101/admin/admin">https://172.22.101.101/admin/admin</a>
Start rancher control plane with container	<code>docker run -d -p 80:80 -p 443:443 rancher/rancher</code>
Reference	Rancher v2.0 Documentation, Rancher Slack, Rancher Forum
Reference	YouTube: Rancher Overview, YouTube: Setup Rancher In A Hard Way
Reference	OpenShift CheatSheet, Rancher CheatSheet, PKS CheatSheet

<https://raw.githubusercontent.com/dennyzhang/cheatsheet.dennyzhang.com/master/cheatsheet-rancher-A4/rancher-architecture.png>

## 1.2 Rancher Components

Name	Command
Control plane - rancher	Complete container management platform
cli	Rancher CLI
VM distro - os	Tiny Linux distro that runs the entire OS as Docker containers
Storage - longhorn	Distributed block storage for Kubernetes

## 1.3 rancher Concepts

Name	Command
Node driver	
Node template	

## 1.4 rancher Command Line

Name	Command
Reference	Link: Rancher CLI
Login to cluster	<code>rancher login https://&lt;SERVER_URL&gt; --token &lt;BEARER_TOKEN&gt;</code>
Select project	<code>rancher context switch</code>
Rancher ssh to vm	<code>rancher ssh node-001</code>
Run kubectl command	<code>rancher kubectl get nodes</code>

## 1.5 Rancher Source Code

Name	Command
Rancher API Layer	GitHub: <a href="#">rancher/norman</a>
Rancher Kubernetes Engine	GitHub: <a href="#">rancher/rke</a> , GitHub: <a href="#">rancher/kontainer-engine</a>

## 1.6 Rancher Footprint

```
> kubectl get all --all-namespaces
```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE
cattle-system	pod/cattle-cluster-agent-55897c6cb-xdj96	1/1	Running	0	6m
cattle-system	pod/cattle-node-agent-89jgs	1/1	Running	0	6m
ingress-nginx	pod/default-http-backend-797c5bc547-669zf	1/1	Running	0	6m
ingress-nginx	pod/nginx-ingress-controller-4gdhf	1/1	Running	0	6m
kube-system	pod/kube-dns-7588d5b5f5-xpfmg	3/3	Running	0	6m
kube-system	pod/kube-dns-autoscaler-5db9bbb766-kdhdn	1/1	Running	0	6m
kube-system	pod/kube-flannel-x686d	2/2	Running	0	6m
kube-system	pod/metrics-server-97bc649d5-8pf7f	1/1	Running	0	6m

kube-system	pod/rke-ingress-controller-deploy-job-7wn5h	0/1	Completed	0	6m
kube-system	pod/rke-kubedns-addon-deploy-job-2pzw6	0/1	Completed	0	6m
kube-system	pod/rke-metrics-addon-deploy-job-69zxc	0/1	Completed	0	6m
kube-system	pod/rke-network-plugin-deploy-job-bv4jc	0/1	Completed	0	6m

NAMESPACE	NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
default	service/kubernetes	ClusterIP	10.43.0.1	<none>	443/TCP	7m
ingress-nginx	service/default-http-backend	ClusterIP	10.43.142.185	<none>	80/TCP	6m
kube-system	service/kube-dns	ClusterIP	10.43.0.10	<none>	53/UDP,53/TCP	6m
kube-system	service/metrics-server	ClusterIP	10.43.20.15	<none>	443/TCP	6m

NAMESPACE	NAME	DESIRED	CURRENT	READY	UP-TO-DATE	AVAILABLE
cattle-system	daemonset.apps/cattle-node-agent	1	1	1	1	1
ingress-nginx	daemonset.apps/nginx-ingress-controller	1	1	1	1	1
kube-system	daemonset.apps/kube-flannel	1	1	1	1	1

NAMESPACE	NAME	DESIRED	CURRENT	UP-TO-DATE	AVAILABLE	AGE
cattle-system	deployment.apps/cattle-cluster-agent	1	1	1	1	6m
ingress-nginx	deployment.apps/default-http-backend	1	1	1	1	6m
kube-system	deployment.apps/kube-dns	1	1	1	1	6m
kube-system	deployment.apps/kube-dns-autoscaler	1	1	1	1	6m
kube-system	deployment.apps/metrics-server	1	1	1	1	6m

NAMESPACE	NAME	DESIRED	CURRENT	READY	AGE
cattle-system	replicaset.apps/cattle-cluster-agent-55897c6cb	1	1	1	6m
ingress-nginx	replicaset.apps/default-http-backend-797c5bc547	1	1	1	6m
kube-system	replicaset.apps/kube-dns-7588d5b5f5	1	1	1	6m
kube-system	replicaset.apps/kube-dns-autoscaler-5db9bbb766	1	1	1	6m
kube-system	replicaset.apps/metrics-server-97bc649d5	1	1	1	6m

NAMESPACE	NAME	DESIRED	SUCCESSFUL	AGE
kube-system	job.batch/rke-ingress-controller-deploy-job	1	1	6m
kube-system	job.batch/rke-kubedns-addon-deploy-job	1	1	6m
kube-system	job.batch/rke-metrics-addon-deploy-job	1	1	6m
kube-system	job.batch/rke-network-plugin-deploy-job	1	1	6m

## 1.7 Rancher CLI Help

Denny > ./rancher --help

Rancher CLI, managing containers one UTF-8 character at a time

Usage: rancher [OPTIONS] COMMAND [arg...]

Version: v2.0.5

Options:

--debug            Debug logging  
 --help, -h        show help  
 --version, -v     print the version

Commands:

apps, [app]            Operations with apps  
 catalog                Operations with catalogs  
 clusters, [cluster]    Operations on clusters  
 context                Operations for the context  
 inspect                View details of resources  
 kubectl                Run kubectl commands  
 login, [l]             Login to a Rancher server  
 namespaces, [namespace] Operations on namespaces

nodes, [node]	Operations on nodes
projects, [project]	Operations on projects
ps	Show workloads in a project
settings, [setting]	Show settings for the current server
ssh	SSH into a node
up	apply compose config
help, [h]	Shows a list of commands or help for one command

Run 'rancher COMMAND --help' for more information on a command.

## 1.8 More Resources

<https://rancher.com/docs/rancher/v2.x/en/quick-start-guide/deployment/>

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