1 Rancher CheatSheet   Cloud

- PDF Link: cheatsheet-rancher-A4.pdf, Category: Cloud

- 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: quickstart/vagrant, `https://172.22.101.101/` admin/admin
Start rancher control plane with container	`docker run -d -p 80:80 -p 443:443 rancher/rancher`
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-architectu

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	`rancher login https://<SERVER_URL> --token <BEARER_TOKEN>`
Select project	`rancher context switch`
Rancher ssh to vm	`rancher ssh node-001`
Run kubectl command	`rancher kubectl get nodes`

1.5 Rancher Source Code

Name	Command
Rancher API Layer	GitHub: rancher/norman
Rancher Kubernetes Engine	GitHub: rancher/rke, GitHub: rancher/kontainer-engine

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	AVAILABL
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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