

# 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: <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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