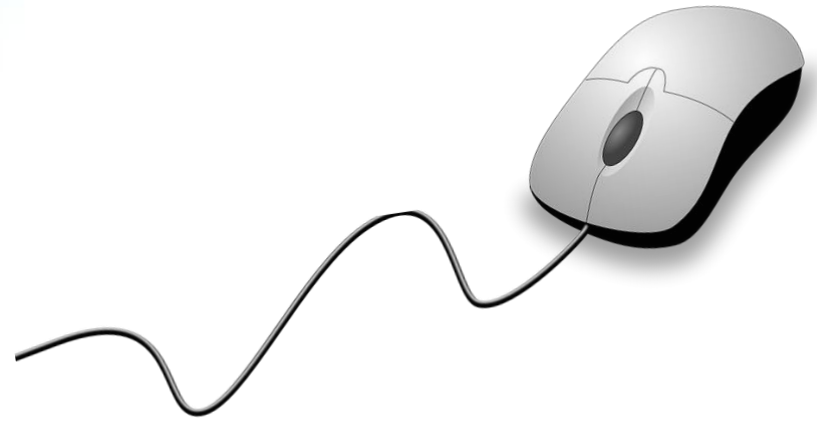


공개SW 솔루션 설치 & 활용 가이드

미들웨어 -> 클라우드서비스



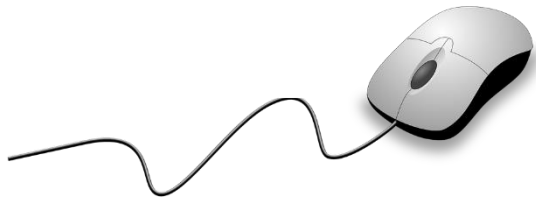
제대로 배워보자

How to Use Open Source Software

Open Source Software Installation & Application Guide



오픈소스 소프트웨어 통합지원센터
Open Source Software Support Center



CONTENTS

1. 개요
2. 기능요약
3. 실행환경
4. 설치 및 실행

1. 개요



소개	<ul style="list-style-type: none"> 컨테이너 워크로드 관리자를 위한 멀티 클러스터 관리 툴 		
주요기능	<ul style="list-style-type: none"> 퍼블릭 클라우드와 온프레임 상의 쿠버네티스의 설치 및 통합 관제 		
대분류	<ul style="list-style-type: none"> 미들웨어 	소분류	<ul style="list-style-type: none"> 클라우드서비스
라이선스형태	<ul style="list-style-type: none"> Apache License 2.0 (https://github.com/rancher/rancher/blob/master/LICENSE) 	사전설치 솔루션	<ul style="list-style-type: none"> Docker
		버전	<ul style="list-style-type: none"> v2.5.7 (2021년 4월 기준)
특징	<ul style="list-style-type: none"> 간편하고 쉽게 매니지드 쿠버네티스 서비스인 EKS, AKS, GKE 사용 가능 모든 테스트의 안전한 정지 및 롤백 지원 SOC II Certified RBAC, MFA, SSO 스택의 모든 레이어에 장애공격 테스트 가능 		
개발회사/커뮤니티	<ul style="list-style-type: none"> https://slack.rancher.io/ https://rancher.com/community/ 		
공식 홈페이지	<ul style="list-style-type: none"> https://rancher.com/ 		





- ✓ 온 프레미스, 클라우드 등 모든 곳에 Kubernetes 클러스터를 배포.
Rancher는 이러한 클러스터를 통합하여 일관된 운영, 워크로드 관리 및 엔터프라이즈 급 보안을 보장



2. 기능요약



- 통합 된 다중 클러스터 관리
 - ✓ Rancher는 중앙 집중식 인증 및 액세스 제어, 엔터프라이즈 보안, 감사, 백업, 업그레이드, 관찰 가능성 및 경고를 통해 Kubernetes 클러스터를 통합
 - ✓ 직관적 인 UI 또는 강력한 CLI를 사용하여 어디서나 몇 분 안에 일관되게 클러스터를 배포하고 보호
- 역할 기반 액세스 제어
 - ✓ 일반 계정 시스템을 자체적으로 가지고 있으며 외부 계정시스템 (AD, GitHub, LDAP)을 사용하거나 SAML/SSO 인증등을 지원
- 중앙 집중식 앱 카탈로그
 - ✓ Helm을 활용한 다양한 오픈소스 배포



3. 실행환경



- 호스트 운영 체제
 - ✓ Linux(ControlPlane / etcd / Worker)
 - ✓ Windows는 Worker노드만 가능
- CPU/Memory 요구사항
 - ✓ RKE and Hosted Kubernetes

DEPLOYMENT SIZE	CLUSTERS	NODES	VCPUS	RAM
Small	Up to 150	Up to 1500	2	8 GB
Medium	Up to 300	Up to 3000	4	16 GB
Large	Up to 500	Up to 5000	8	32 GB
X-Large	Up to 1000	Up to 10,000	16	64 GB
XX-Large	Up to 2000	Up to 20,000	32	128 GB



3. 실행환경



✓ K3s Kubernetes

DEPLOYMENT SIZE	CLUSTERS	NODES	VCPUS	RAM	DATABASE SIZE
Small	Up to 150	Up to 1500	2	8 GB	2 cores, 4 GB + 1000 IOPS
Medium	Up to 300	Up to 3000	4	16 GB	2 cores, 4 GB + 1000 IOPS
Large	Up to 500	Up to 5000	8	32 GB	2 cores, 4 GB + 1000 IOPS
X-Large	Up to 1000	Up to 10,000	16	64 GB	2 cores, 4 GB + 1000 IOPS
XX-Large	Up to 2000	Up to 20,000	32	128 GB	2 cores, 4 GB + 1000 IOPS

✓ RancherD

DEPLOYMENT SIZE	CLUSTERS	NODES	VCPUS	RAM
Small	Up to 5	Up to 50	2	5 GB
Medium	Up to 15	Up to 200	3	9 GB



3. 실행환경



✓ Docker

DEPLOYMENT SIZE	CLUSTERS	NODES	VCPUS	RAM
Small	Up to 5	Up to 50	1	4 GB
Medium	Up to 15	Up to 200	2	8 GB



4. 설치 및 실행



세부 목차

- 4.1 Docker 설치
- 4.2 Rancher 배포
- 4.3 Rancher Cluster 추가
- 4.4 Rancher Cluster Dashboard
- 4.5 Kubernetes 관리
- 4.6 Rancher Marketplace



4. 설치 및 실행



4.1 docker 설치

- Docker 설치

\$ apt install docker.io

```
root@ubuntu:~# apt install docker.io
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  bridge-utils cgroupfs-mount containerd pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools debootstrap docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils cgroupfs-mount containerd docker.io pigz runc ubuntu-fan
0 upgraded, 7 newly installed, 0 to remove and 84 not upgraded.
Need to get 63.8 MB of archives.
After this operation, 320 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://kr.archive.ubuntu.com/ubuntu bionic/universe amd64 pigz amd64 2.4-1 [57.4 kB]
```

- Docker 시작/상태 확인

\$ systemctl start docker / \$ systemctl enable docker

```
root@ubuntu:~# systemctl start docker
root@ubuntu:~# systemctl enable docker
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.
root@ubuntu:~# systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/lib/systemd/system/docker.service; enabled; vendor preset: enabled)
   Active: active (running) since Tue 2021-04-13 05:40:41 UTC; 9s ago
     Docs: https://docs.docker.com
   Main PID: 2965 (dockerd)
    Tasks: 9
   CGroup: /system.slice/docker.service
           └─2965 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.sock

Apr 13 05:40:40 ubuntu dockerd[2965]: time="2021-04-13T05:40:40.944539216Z" level=warning msg="Your kernel does not support swap memory limit"
Apr 13 05:40:40 ubuntu dockerd[2965]: time="2021-04-13T05:40:40.944758405Z" level=warning msg="Your kernel does not support cgroup rt period"
Apr 13 05:40:40 ubuntu dockerd[2965]: time="2021-04-13T05:40:40.944862370Z" level=warning msg="Your kernel does not support cgroup rt runtime"
Apr 13 05:40:40 ubuntu dockerd[2965]: time="2021-04-13T05:40:40.945109784Z" level=info msg="Loading containers: start."
Apr 13 05:40:41 ubuntu dockerd[2965]: time="2021-04-13T05:40:41.086222968Z" level=info msg="Default bridge (docker0) is assigned with an IP address 172.17.0.0/16. Daemon option --bip ca
Apr 13 05:40:41 ubuntu dockerd[2965]: time="2021-04-13T05:40:41.173875290Z" level=info msg="Loading containers: done."
Apr 13 05:40:41 ubuntu dockerd[2965]: time="2021-04-13T05:40:41.200399781Z" level=info msg="Docker daemon" commit=369ce74a3c graphdriver(s)=overlay2 version=19.03.6
Apr 13 05:40:41 ubuntu dockerd[2965]: time="2021-04-13T05:40:41.200803885Z" level=info msg="Daemon has completed initialization"
Apr 13 05:40:41 ubuntu systemd[1]: Started Docker Application Container Engine.
Apr 13 05:40:41 ubuntu dockerd[2965]: time="2021-04-13T05:40:41.251617193Z" level=info msg="API listen on /var/run/docker.sock"
lines 1-19/19 (END)
```



4. 설치 및 실행



4.2 Rancher 배포

```
$ docker run -d --restart=unless-stopped \
-p 80:80 -p 443:443 \
--privileged \
rancher/rancher:latest
```

```
root@ubuntu:~# docker run -d --restart=unless-stopped \
> -p 80:80 -p 443:443 \
> --privileged \
> rancher/rancher:latest
Unable to find image 'rancher/rancher:latest' locally
latest: Pulling from rancher/rancher
92dc2a97ff99: Pull complete
be13a9d27eb8: Pull complete
c8299583700a: Pull complete
1cfc4b91f663: Pull complete
89e5e49c9f45: Pull complete
b9a1f2396473: Download complete
05acc7758320: Download complete
802ebeb6c6939: Download complete
84d12ccfb318: Download complete
c30c8b067a5c: Download complete
ec91bd223976: Download complete
ea81a3940aa1: Download complete
a62e7995c65c: Download complete
32fb6c8e3291: Download complete
7a8f77efbf71: Download complete
c1ff92705bd6: Download complete
cf09cd3d7cd8: Download complete
0cf21519ca3d: Download complete
0ecded6172d8: Download complete
1b0500935351: Download complete
```

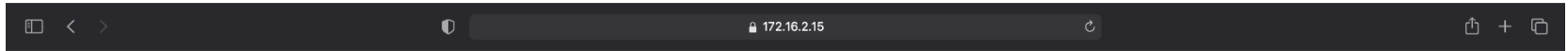


4. 설치 및 실행



4.2 Rancher 배포

- Rancher 접속



Welcome to Rancher

Set password for the default `admin` user

Set a specific password to use:
 Use a new randomly generated password:

New Password *

Confirm Password *

Set Default View *

I want to create or manage multiple clusters
 I'm only going to use the cluster Rancher was installed on

Allow collection of anonymous statistics [Learn More](#)
 I agree to the [Terms and Conditions](#) for using Rancher *

Continue



4. 설치 및 실행



4.2 Rancher 배포

- Password 입력

Welcome to Rancher


Set password for the default `admin` user


Set a specific password to use: Use a new randomly generated password:

New Password *
.....

Confirm Password *
.....

Set Default View *

 I want to create or manage multiple clusters

 I'm only going to use the cluster Rancher was installed on

Allow collection of anonymous statistics [Learn More](#)

I agree to the [Terms and Conditions](#) for using Rancher *

Continue

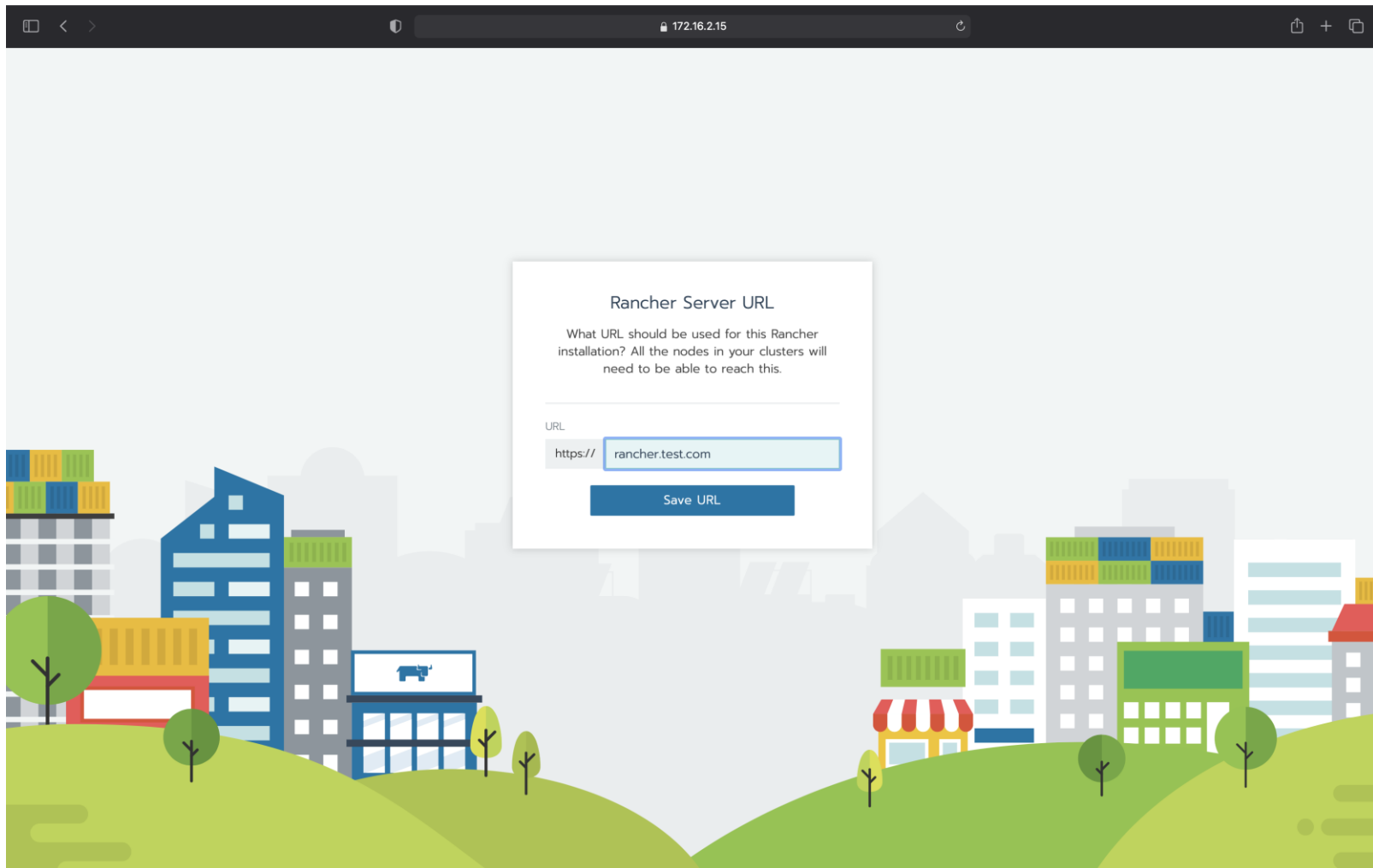


4. 설치 및 실행



4.2 Rancher 배포

- Rancher Server URL 설정

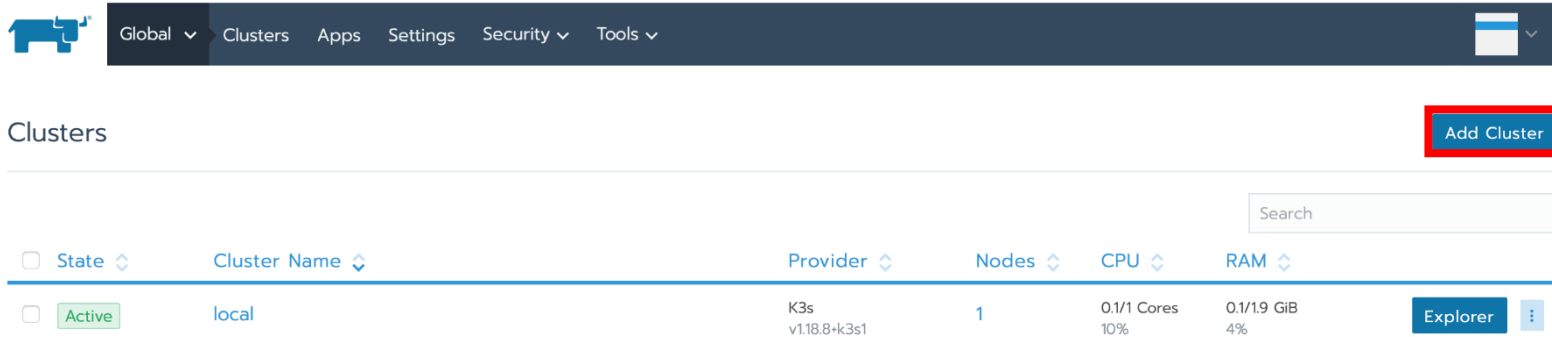


4. 설치 및 실행



4.3 Rancher Cluster 추가

- Rancher Host 추가



The screenshot shows the Rancher UI interface. At the top, there is a navigation bar with the Rancher logo and menu items: Global, Clusters, Apps, Settings, Security, and Tools. Below the navigation bar, the 'Clusters' section is visible. On the right side of this section, there is a red-bordered button labeled 'Add Cluster'. Below the 'Add Cluster' button is a search input field. A table lists the existing clusters with columns for State, Cluster Name, Provider, Nodes, CPU, and RAM. One cluster is listed with the name 'local', provider 'K3s v1.18.8+k3s1', 1 node, 0.1/1 Cores (10% CPU usage), and 0.1/1.9 GiB (4% RAM usage). An 'Explorer' button and a menu icon are located to the right of the cluster row.

State	Cluster Name	Provider	Nodes	CPU	RAM	
Active	local	K3s v1.18.8+k3s1	1	0.1/1 Cores 10%	0.1/1.9 GiB 4%	Explorer



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Bare-metal server위에 cluster 추가



Add Cluster - Select Cluster Type

Register an existing Kubernetes cluster

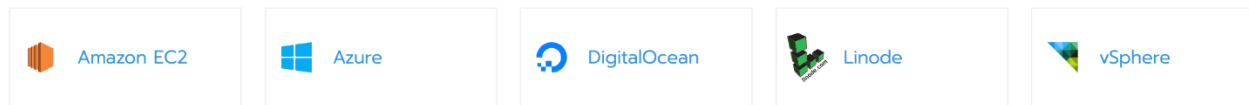


Create a new Kubernetes cluster

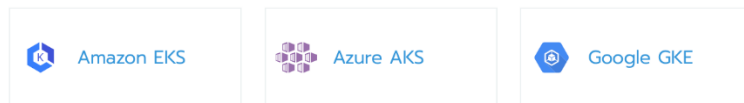
With RKE and existing bare-metal servers or virtual machines.



With RKE and new nodes in an infrastructure provider



With a hosted Kubernetes provider



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Cluster 설정



Add Cluster - Custom

Cluster Name Add a Description

Cluster1

▶ Member Roles
Control who has access to the cluster and what permission they have to change it.

▼ Labels & Annotations None
Configure labels and annotations for the cluster.

Labels	Annotations
+ Add Label	+ Add Annotation

Cluster Options

[Edit as YAML](#)

[Expand All](#)

- ▶ Kubernetes Options
Customize the kubernetes cluster options
- ▶ Private Registry
Configure a default private registry for provisioning RKE cluster components. When enabled, all system images required for RKE cluster provisioning and system add-ons startup will be pulled from this registry.
- ▶ Advanced Options
Customize advanced cluster options
- ▶ Authorized Endpoint
Enabling the authorized cluster endpoint allows direct communication with the cluster, bypassing the API proxy. Authorized endpoints can be retrieved by generating a kubeconfig for the cluster.



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Kubernetes 옵션

Cluster Options

Edit as YAML

Expand All

▼ Kubernetes Options
Customize the kubernetes cluster options

Kubernetes Version
v1.20.5-rancher1-1

Network Provider
Canal (Network Isolation Available)

Windows Support
 Enabled
 Disabled
Available for Kubernetes 1.15 or above with Flannel network provider.

Project Network Isolation
 Enabled
 Disabled

CNI Plugin MTU Override
0
Only applied if the value is non-zero. When applied, the MTU value is explicitly configured for the chosen network provider (disabling auto-discovery). The override must be calculated from the host's MTU minus the CNI plugin's required overhead.

Cloud Provider

- None
- Amazon (In-Tree)
- Azure (In-Tree)
- Custom (In-Tree)
- External (Out-of-tree)

Please edit the YAML to add in any other cloud providers

Configuring a Cloud Provider in your cluster without configuring the prerequisites will cause your cluster to not provision correctly. Prerequisites needed for supported cloud providers can be found in the documentation.



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Private Registry 옵션

▼ Private Registry

Configure a default private registry for provisioning RKE cluster components. When enabled, all system images required for RKE cluster provisioning and system add-ons startup will be pulled from this registry.

Private Registry

Disabled

Enabled



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Advanced Options

Advanced Options
Customize advanced cluster options

Ngix Ingress
 Enabled
 Disabled

Ngix Default Backend
 Enabled
 Disabled

Node Port Range

Metrics Server Monitoring
 Enabled
 Disabled

Pod Security Policy Support
 Enabled
 Disabled

Default Pod Security Policy
None

Docker version on nodes
 Require a supported Docker version
 Allow unsupported versions

Docker Root Directory

Secrets Encryption
 Enabled
 Disabled

etcd Snapshot Backup Target
 local
snapshots only exist locally, no external backups are performed
 s3
etcd snapshots will occur locally, subsequently the snapshot will be backed up to the configured s3 target

Recurring etcd Snapshot Enabled
 Yes No

Recurring etcd Snapshot Interval
 hours

Recurring etcd Snapshot Retention
Keep the last

Scheduled CIS Scan Enabled
 Yes No

Scheduled CIS Scan Profile
RKE-CIS-15 Permissive

Scheduled CIS Scan Interval (cron)

00:00 every day

Scheduled CIS Scan Report Retention
Keep the last

Maximum Worker Nodes Unavailable
 Percentage

Drain nodes
 Yes No

Agent Environment Variables

Variable Name * Value

[+ Add Environment Variable](#)



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Authorized Endpoint

▼ Authorized Endpoint
Enabling the authorized cluster endpoint allows direct communication with the cluster, bypassing the API proxy. Authorized endpoints can be retrieved by generating a kubeconfig for the cluster.

Authorized Cluster Endpoint

Enabled
 Disabled

FQDN

dev.example.com

Certificate ⓘ

Paste in the certificate, starting with -----BEGIN CERTIFICATE-----



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Node option

Cluster Options

Customize Node Run Command
Editing node options will update the command you will run on your existing machines

1 Node Options
Choose what roles the node will have in the cluster. The cluster needs to have at least one node with each role.
Node Role

etcd Control Plane Worker

Show advanced options

2 Run this command on one or more existing machines already running a supported version of Docker.

```
sudo docker run -d --privileged --restart=unless-stopped --net=host -v /etc/kubernetes:/etc/kubernetes -v /var/run:/var/run rancher/rancher-agent:v2.5.7 --server https://172.16.2.18 --token ph8cdrpm4hgwxrcp8l2rctxzvshwdjl2kf8vmck4x2j66vp5hwtqzp --ca-checksum 598b990a317ff3ceb8250e8d4651268251b05153e34cb4af090a977452d1b232 --etcd --controlplane --worker
```

Cluster에 Node를 추가할 때도 role 체크 후 추가 할 Node에 붙여 넣으면 됨

Done



4. 설치 및 실행



4.3 Rancher Cluster 추가

- Docker가 설치 된 노드에 붙여넣기

```
-- daniel@daniel: / - ssh root@172.16.2.18
-- root@down: ~ - ssh root@172.16.2.16
-- Terminal - ssh root@172.16.2.17
suse:~ # sudo docker run -d --privileged --restart=unless-stopped --net=host -v /etc/kubernetes:/etc/kubernetes -v /var/run:/var/run rancher/rancher-agent:v2.5.7 --server https://172.16.2.18 --token ph8cdrpm4hgwxrcp8l2rctxzvshwdjl2kf8vmck4x2j66vp5hwtqzp --ca-checksum 598b990a317ff3ceb8250e8d4651268251b05153e34cb4af090a977452d1b232 --etcd --controlplane --worker
```

- Cluster에서 노드 확인

cluster1 ▾ Cluster Nodes Storage ▾ Projects/Namespaces Members Tools ▾ Cluster Explorer

Nodes Edit Cluster

Cordon || Drain ↻ Delete 🗑

Search

<input type="checkbox"/> State ▾	Name ▾	Roles ▾	Version ▾	CPU ▾	RAM ▾	Pods ▾
<input type="checkbox"/> Active	suse 172.16.2.17 🗨	All	v1.20.5 👤 19.3.15	0.4/1 Cores	0.1/1.8 GiB	10/110 ⋮

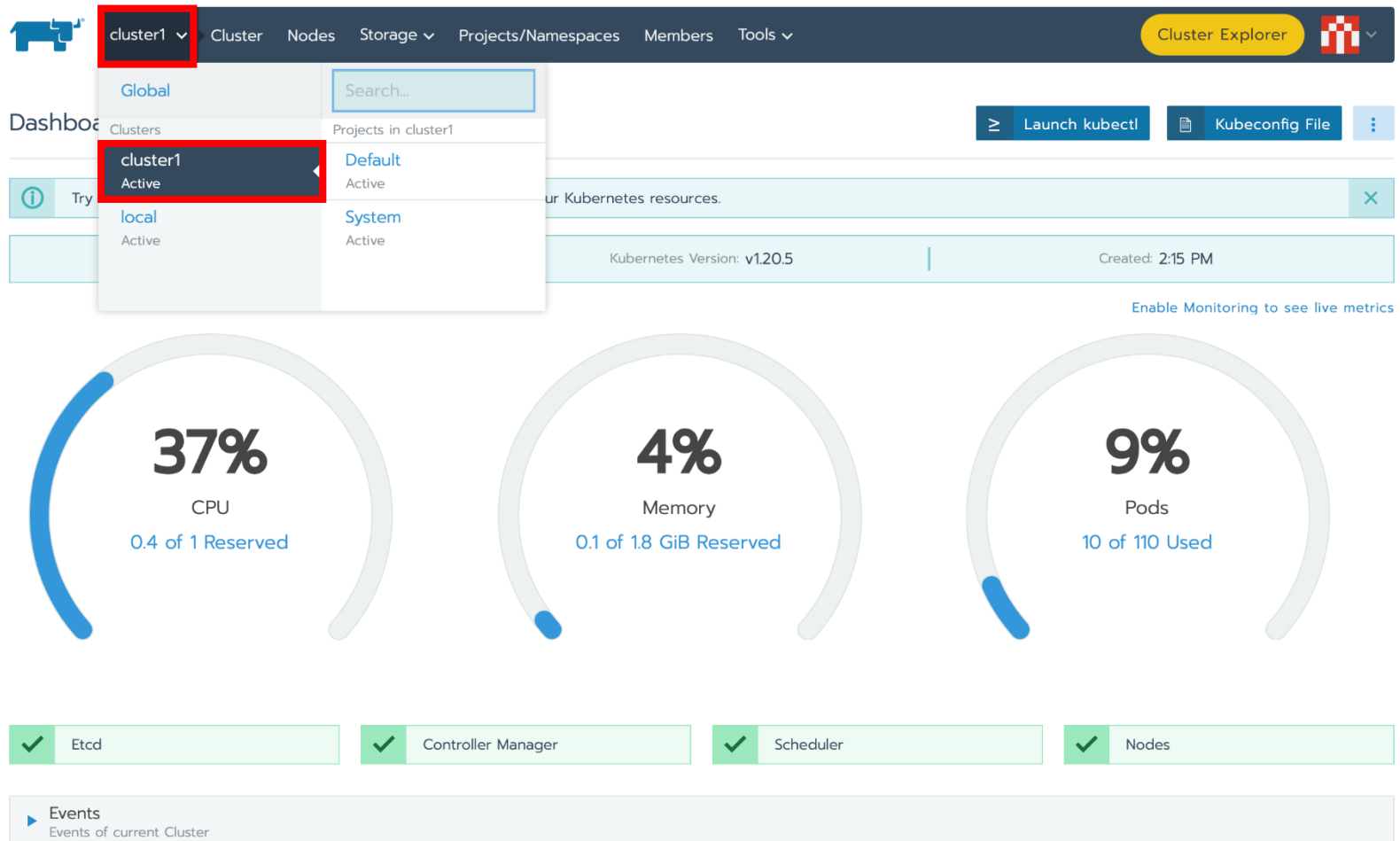


4. 설치 및 실행



4.4 Rancher Cluster Dashboard

- Cluster 모니터링



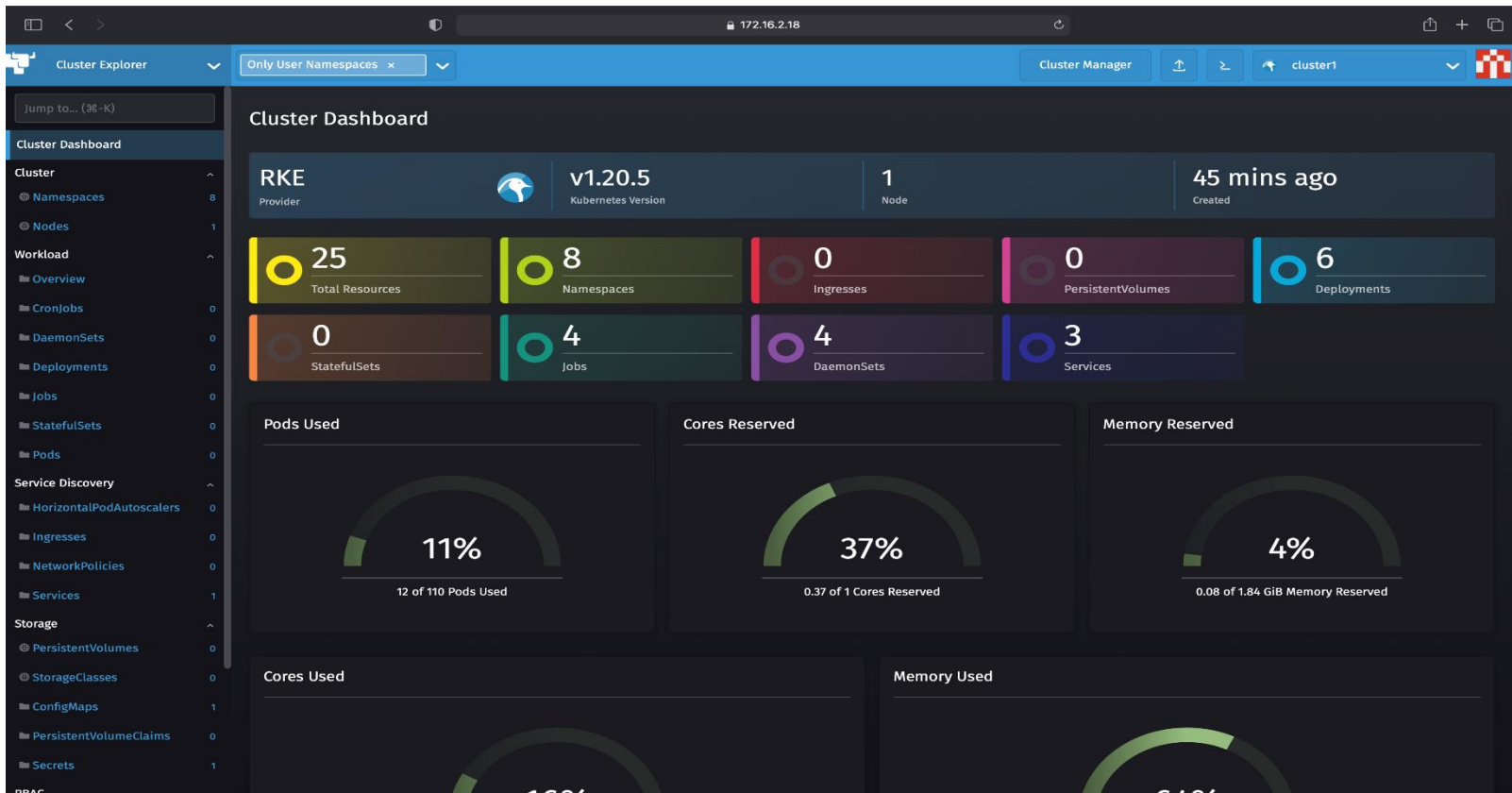
4. 설치 및 실행



4.5 kubernetes 관리

- Kubernetes 관리

<input type="checkbox"/> State	Cluster Name	Provider	Nodes	CPU	RAM	
<input checked="" type="checkbox"/> Active	cluster1	Custom v1.20.5	1	0.4/1 Cores 37%	0.1/1.8 GiB 4%	Explorer ⋮



The screenshot displays the Rancher Cluster Explorer interface for a cluster named 'cluster1'. The dashboard provides a comprehensive overview of the cluster's status and resource usage.

Cluster Dashboard Summary:

- Provider:** RKE
- Kubernetes Version:** v1.20.5
- Nodes:** 1
- Created:** 45 mins ago

Resource Usage Summary:

- Total Resources:** 25
- Namespaces:** 8
- Ingresses:** 0
- PersistentVolumes:** 0
- Deployments:** 6
- StatefulSets:** 0
- Jobs:** 4
- DaemonSets:** 4
- Services:** 3

Resource Utilization:

- Pods Used:** 11% (12 of 110 Pods Used)
- Cores Reserved:** 37% (0.37 of 1 Cores Reserved)
- Memory Reserved:** 4% (0.08 of 1.84 GiB Memory Reserved)

The interface includes a sidebar with navigation options such as Cluster Dashboard, Namespaces, Nodes, Workload, Service Discovery, and Storage. The main content area features various gauges and charts to monitor the cluster's health and performance.

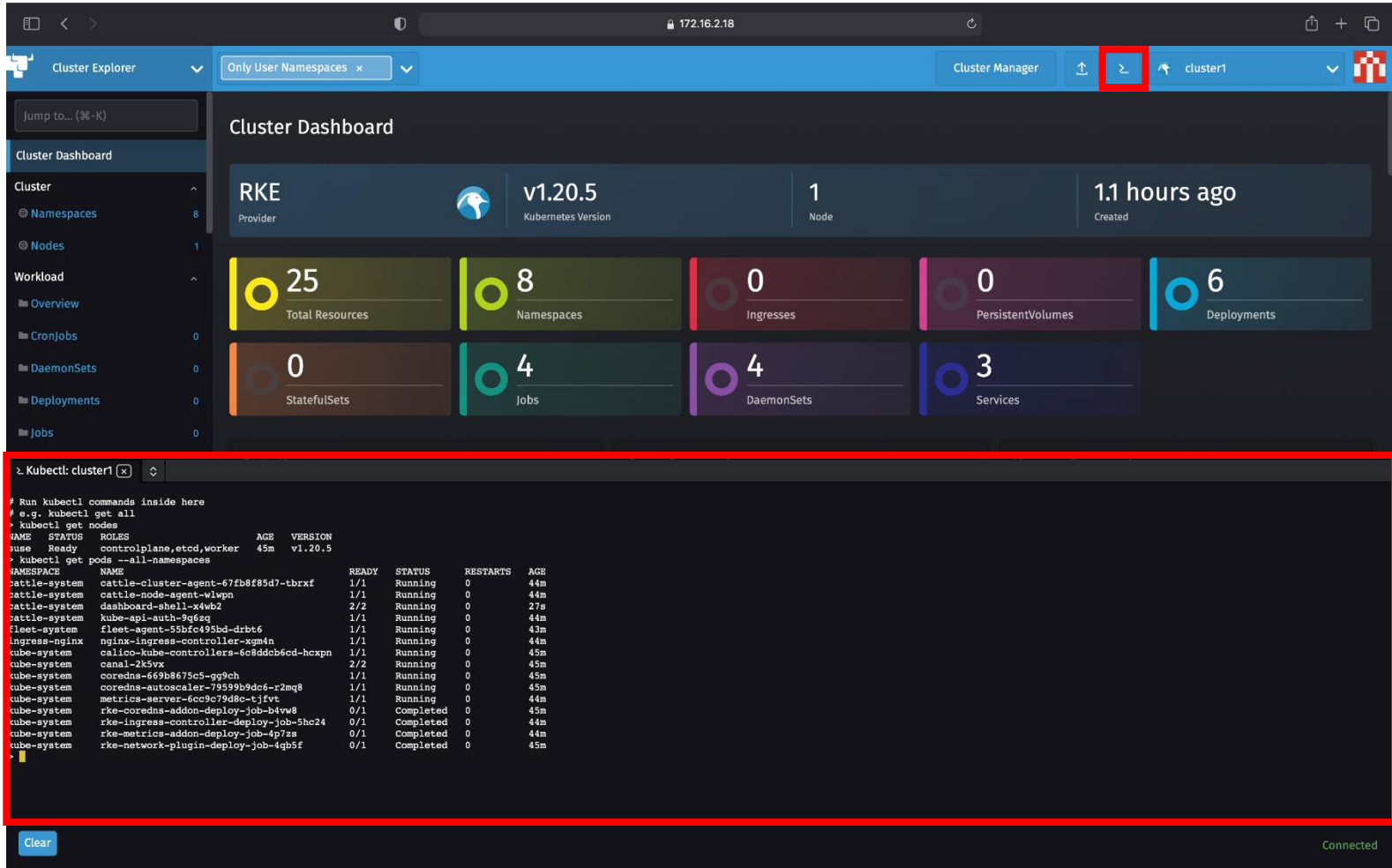


4. 설치 및 실행



4.5 kubernetes 관리

- Kubernetes 관리



The screenshot shows the Rancher Cluster Explorer interface. The top navigation bar includes 'Cluster Explorer', 'Only User Namespaces', 'Cluster Manager', and a cluster dropdown menu set to 'cluster1'. The main area displays the 'Cluster Dashboard' for an RKE provider, version v1.20.5, with 1 node and created 1.1 hours ago. The dashboard features several metrics cards: Total Resources (25), Namespaces (8), Ingresses (0), PersistentVolumes (0), Deployments (6), StatefulSets (0), Jobs (4), DaemonSets (4), and Services (3). A terminal window at the bottom, titled 'Kubectl: cluster1', shows the output of the command 'kubectl get nodes'.

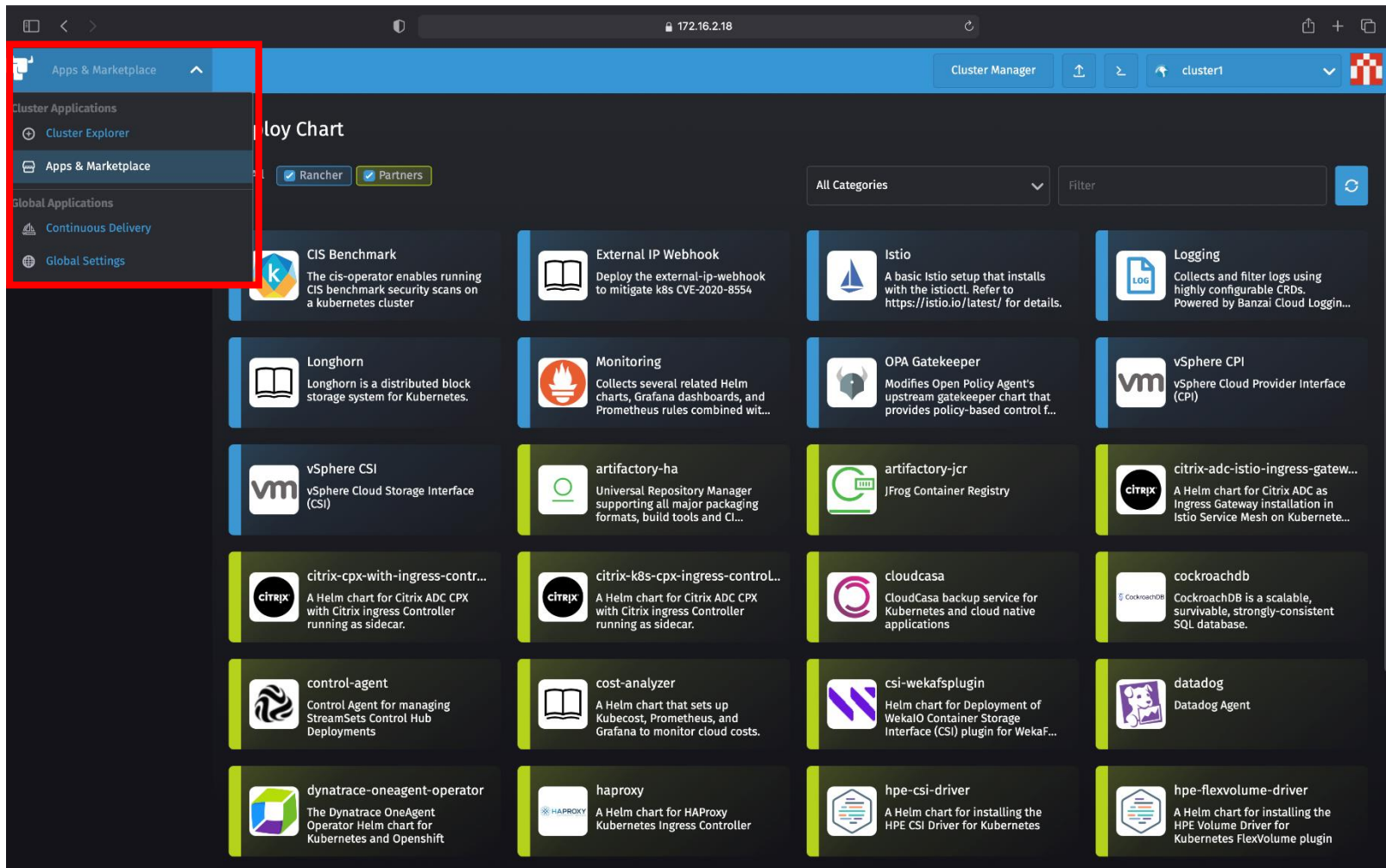
```
# Run kubectl commands inside here
# e.g. kubectl get all
~ kubectl get nodes
NAME     STATUS    ROLES    AGE   VERSION
suse     Ready    controlplane,etcd,worker  45m   v1.20.5
~ kubectl get pods --all-namespaces
NAMESPACE   NAME                                     READY   STATUS    RESTARTS   AGE
cattle-system  cattle-cluster-agent-67fb8f85d7-tbrxf  1/1     Running   0           44m
cattle-system  cattle-node-agent-wlwpn                 1/1     Running   0           44m
cattle-system  dashboard-shell-x4wb2                   2/2     Running   0           27s
cattle-system  kube-api-auth-9g6sq                       1/1     Running   0           44m
fleet-system   fleet-agent-55bfc499bd-drbt6             1/1     Running   0           43m
ingress-nginx  nginx-ingress-controller-xgm4n           1/1     Running   0           44m
kube-system    calico-kube-controllers-6c8dddb6cd-hcxpn  1/1     Running   0           45m
kube-system    canal-2k5vx                               2/2     Running   0           45m
kube-system    coredns-669b8675c5-gg9ch                 1/1     Running   0           45m
kube-system    coredns-autoscaler-79599b5dc6-f2mq8      1/1     Running   0           45m
kube-system    metrics-server-fcc9cf9d8c-tj1ev          1/1     Running   0           44m
kube-system    rke-coredns-addon-deploy-job-b4vw8       0/1     Completed 0           45m
kube-system    rke-ingress-controller-deploy-job-5hc24  0/1     Completed 0           44m
kube-system    rke-metrics-addon-deploy-job-4p7zs       0/1     Completed 0           44m
kube-system    rke-network-plugin-deploy-job-4qb5f      0/1     Completed 0           45m
```

4. 설치 및 실행



4.6 Rancher Marketplace

- 다양한 오픈소스 툴 제공



The screenshot displays the Rancher App & Marketplace interface. The left sidebar is highlighted with a red box, showing the 'Apps & Marketplace' menu item selected. The main content area displays a grid of application cards, each representing a different tool or service available for deployment. The cards are organized into categories, with 'Rancher' and 'Partners' filters visible at the top. The cards include:

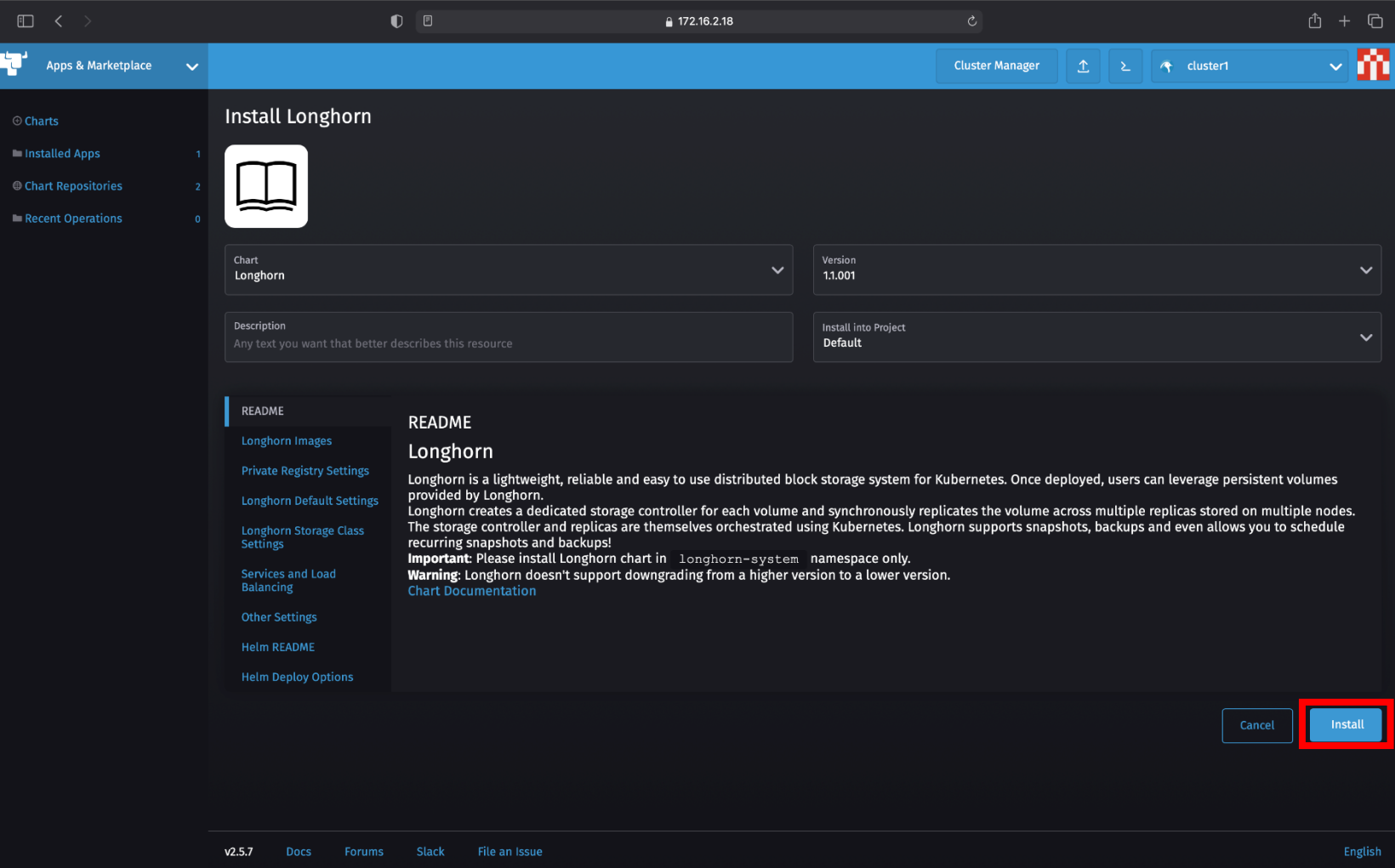
- CIS Benchmark**: The cis-operator enables running CIS benchmark security scans on a kubernetes cluster.
- External IP Webhook**: Deploy the external-ip-webhook to mitigate k8s CVE-2020-8554.
- Istio**: A basic Istio setup that installs with the istioctl. Refer to <https://istio.io/latest/> for details.
- Logging**: Collects and filter logs using highly configurable CRDs. Powered by Banzai Cloud Login...
- Longhorn**: Longhorn is a distributed block storage system for Kubernetes.
- Monitoring**: Collects several related Helm charts, Grafana dashboards, and Prometheus rules combined wit...
- OPA Gatekeeper**: Modifies Open Policy Agent's upstream gatekeeper chart that provides policy-based control f...
- vSphere CPI**: vSphere Cloud Provider Interface (CPI)
- vSphere CSI**: vSphere Cloud Storage Interface (CSI)
- artifactory-ha**: Universal Repository Manager supporting all major packaging formats, build tools and Cl...
- artifactory-jcr**: JFrog Container Registry
- citrix-adc-istio-ingress-gatew...**: A Helm chart for Citrix ADC as Ingress Gateway installation in Istio Service Mesh on Kubernet...
- citrix-cpx-with-ingress-contr...**: A Helm chart for Citrix ADC CPX with Citrix ingress Controller running as sidecar.
- citrix-k8s-cpx-ingress-control...**: A Helm chart for Citrix ADC CPX with Citrix ingress Controller running as sidecar.
- cloudcasa**: CloudCasa backup service for Kubernetes and cloud native applications
- cockroachdb**: CockroachDB is a scalable, survivable, strongly-consistent SQL database.
- control-agent**: Control Agent for managing StreamSets Control Hub Deployments
- cost-analyzer**: A Helm chart that sets up Kubecost, Prometheus, and Grafana to monitor cloud costs.
- csi-wekafplugin**: Helm chart for Deployment of WekaIO Container Storage Interface (CSI) plugin for WekaF...
- datadog**: Datadog Agent
- dynatrace-oneagent-operator**: The Dynatrace OneAgent Operator Helm chart for Kubernetes and Openshift
- haproxy**: A Helm chart for HAProxy Kubernetes Ingress Controller
- hpe-csi-driver**: A Helm chart for installing the HPE CSI Driver for Kubernetes
- hpe-flexvolume-driver**: A Helm chart for installing the HPE Volume Driver for Kubernetes FlexVolume plugin

4. 설치 및 실행



4.6 Rancher Marketplace

- 오픈소스 설치



Apps & Marketplace

Cluster Manager cluster1

Install Longhorn

Chart: Longhorn

Version: 1.1.001

Description: Any text you want that better describes this resource

Install into Project: Default

README

Longhorn Images

Private Registry Settings

Longhorn Default Settings

Longhorn Storage Class Settings

Services and Load Balancing

Other Settings

Helm README

Helm Deploy Options

README

Longhorn

Longhorn is a lightweight, reliable and easy to use distributed block storage system for Kubernetes. Once deployed, users can leverage persistent volumes provided by Longhorn.

Longhorn creates a dedicated storage controller for each volume and synchronously replicates the volume across multiple replicas stored on multiple nodes. The storage controller and replicas are themselves orchestrated using Kubernetes. Longhorn supports snapshots, backups and even allows you to schedule recurring snapshots and backups!

Important: Please install Longhorn chart in `longhorn-system` namespace only.

Warning: Longhorn doesn't support downgrading from a higher version to a lower version.

[Chart Documentation](#)

Cancel **Install**

v2.5.7 Docs Forums Slack File an Issue English

Open Source Software Installation & Application Guide



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