

Kubernetes

Install in mac

```
[192:~ men666anas$ brew install kubectl
Running `brew update --auto-update`...
[==> Auto-updated Homebrew!
Updated 3 taps (homebrew/core, homebrew/cask and homebrew/services).
==> New Formulae
censys                libvatek              rush-parallel
cql-proxy             lucky-commit          slither-analyzer
cryptic-compile       ouch                 solc-select
==> New Casks
aliwangwang           moderndeck            tl-legacy
chromium-gost         nanoem               virtualbuddy
httpie                playcover-community
micromamba            qspace-pro

You have 15 outdated formulae installed.
You can upgrade them with brew upgrade
or list them with brew outdated.

==> Downloading https://ghcr.io/v2/homebrew/core/kubernetes-cli/manifests/1.24.3
##### 100.0%
==> Downloading https://ghcr.io/v2/homebrew/core/kubernetes-cli/blobs/sha256:69d
==> Downloading from https://pkg-containers.githubusercontent.com/ghcr1/blobs/sh
##### 100.0%
```

Cek Version

```
[192:~ men666anas$ kubectl version --client
WARNING: This version information is deprecated and will be replaced with the output from kubectl version --short. Use --output=yaml|json to get the full version.
Client Version: version.Info{Major:"1", Minor:"24", GitVersion:"v1.24.2", GitCommit:"f66044f4361b9f1f96f0053dd46cb7dce5e990a8", GitTreeState:"clean", BuildDate:"2022-06-15T14:22:29Z", GoVersion:"go1.18.3", Compiler:"gc", Platform:"darwin/amd64"}
Kustomize Version: v4.5.4
192:~ men666anas$
```

Install Minikube

```
192:~ men666anas$ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-darwin-amd64
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 70.9M  100 70.9M    0     0  3101k      0  0:00:23  0:00:23 --:--:-- 3540k
192:~ men666anas$ sudo install minikube-darwin-amd64 /usr/local/bin/minikube
Password:
192:~ men666anas$
```

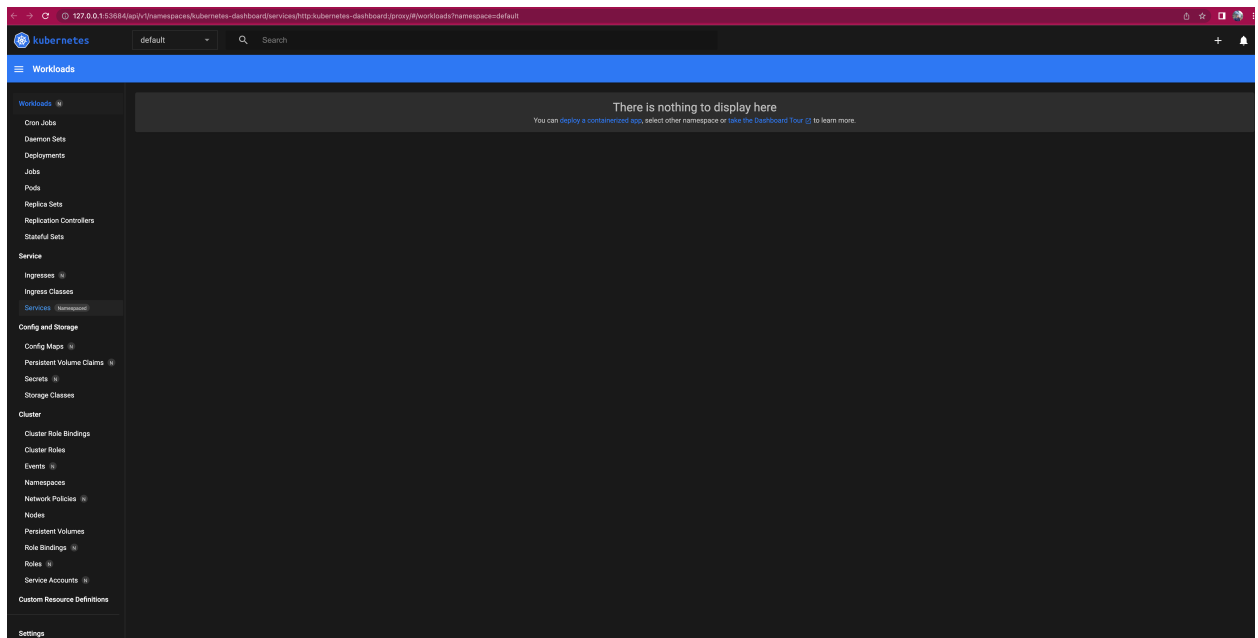
Minikube Start

```
192:~ men666anas$ minikube start
🐹 minikube v1.26.1 on Darwin 12.5
🔧 Automatically selected the docker driver
🔑 Using Docker Desktop driver with root privileges
👍 Starting control plane node minikube in cluster minikube
🚚 Pulling base image ...
📦 Downloading Kubernetes v1.24.3 preload ...
> preloaded-images-k8s-v18-v1...: 405.75 MiB / 405.75 MiB 100.00% 1.68 MiB/s
> gcr.io/k8s-minikube/kicbase: 386.61 MiB / 386.61 MiB 100.00% 1.60 MiB/s
> gcr.io/k8s-minikube/kicbase: 0 B [ ] ?% ? p/s 2m26s
🔥 Creating docker container (CPUs=2, Memory=1986MB) ...
🐳 Preparing Kubernetes v1.24.3 on Docker 20.10.17 ...
  ▪ Generating certificates and keys ...
  ▪ Booting up control plane ...
  ▪ Configuring RBAC rules ...
🔍 Verifying Kubernetes components...
  ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
🌟 Enabled addons: storage-provisioner, default-storageclass
🏠 Done! kubectrl is now configured to use "minikube" cluster and "default" namespace by default
192:~ men666anas$
```

Kubernetes Dashboard

```
192:~ men666anas$ kubectl get po -A
NAMESPACE      NAME                                     READY   STATUS    RESTARTS   AGE
kube-system     coredns-6d4b75cb6d-j7jxg              1/1     Running   0           11m
kube-system     etcd-minikube                          1/1     Running   0           11m
kube-system     kube-apiserver-minikube                1/1     Running   0           11m
kube-system     kube-controller-manager-minikube       1/1     Running   0           11m
kube-system     kube-proxy-znqrx                       1/1     Running   0           11m
kube-system     kube-scheduler-minikube                1/1     Running   0           11m
kube-system     storage-provisioner                    1/1     Running   1 (10m ago) 11m

192:~ men666anas$ minikube dashboard
🔧 Enabling dashboard ...
  ■ Using image kubernetesui/dashboard:v2.6.0
  ■ Using image kubernetesui/metrics-scraper:v1.0.8
😬 Verifying dashboard health ...
🚀 Launching proxy ...
😬 Verifying proxy health ...
🔑 Opening http://127.0.0.1:53684/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dash
board:/proxy/ in your default browser...
```



Deploy

```
Last login: Tue Aug 16 15:09:28 on ttys001

The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
192:~ men666anas$ kubectl create deployment hello-minikube --image=k8s.gcr.io/echoserver:1.4
deployment.apps/hello-minikube created
192:~ men666anas$ kubectl expose deployment hello-minikube --type=NodePort --port=8080
service/hello-minikube exposed
192:~ men666anas$
```

```
192:~ men666anas$ kubectl get services hello-minikube
NAME          TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
hello-minikube NodePort    10.108.253.147 <none>         8080:30700/TCP   36s
192:~ men666anas$
```

```
192:~ men666anas$ kubectl get services hello-minikube
NAME          TYPE        CLUSTER-IP    EXTERNAL-IP    PORT(S)          AGE
hello-minikube NodePort    10.108.253.147 <none>         8080:30700/TCP   36s
192:~ men666anas$ minikube service hello-minikube
```

NAMESPACE	NAME	TARGET PORT	URL
default	hello-minikube	8080	http://192.168.49.2:30700

🚀 Starting tunnel for service hello-minikube.

NAMESPACE	NAME	TARGET PORT	URL
default	hello-minikube		http://127.0.0.1:57704

🚀 Opening service default/hello-minikube in default browser...
 ⚠️ Because you are using a Docker driver on darwin, the terminal needs to be open to run it.

```
127.0.0.1:57704

CLIENT VALUES:
client_address=172.17.0.1
command=GET
real path=/
query=nil
request_version=1.1
request_uri=http://127.0.0.1:8080/

SERVER VALUES:
server_version=nginx: 1.10.0 - lua: 10001

HEADERS RECEIVED:
accept=text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3;q=0.9
accept-encoding=gzip, deflate, br
accept-language=en-US,en;q=0.9
connection=keep-alive
host=127.0.0.1:57704
sec-ch-ua="Chromium",v="104", " Not A;Brand",v="99", "Google Chrome",v="104"
sec-ch-ua-mobile=?0
sec-ch-ua-platform="macOS"
sec-fetch-dest=document
sec-fetch-mode=navigate
sec-fetch-site=none
sec-fetch-user=?1
upgrade-insecure-requests=1
user-agent=Mozilla/5.0 (Macintosh; Intel Mac OS X 10_15_7) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/104.0.0.0 Safari/537.36
BODY:
-no body in request-
```

127.0.0.1:53946evl@namespaces:kubernetes: dashboard/services/http.kubernetes: dashboard.proxy/#/workloads?namespace=default

kubernetes default 🔍 Search

Workloads

- Workloads
 - Cron Jobs
 - Daemon Sets
 - Deployments
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 - Replication Controllers
 - Stateful Sets
- Service
- Ingresses
- Ingress Classes
- Services
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- Cluster
 - Cluster Role Bindings
 - Cluster Roles
 - Events
- Namespaces
- Network Policies
- Nodes
- Persistent Volumes
- Role Bindings
- Roles
- Service Accounts
- Custom Resource Definitions

Workload Status

Running 1 Deployments

Running 1 Pods

Running 1 Replica Sets

Deployments

Name	Images	Labels	Pods	Created
hello-minikube	k8s.gcr.io/echoserver:1.4	app: hello-minikube	1 / 1	5 minutes ago

Pods

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created
hello-minikube-5c9f5cd89-27yp	k8s.gcr.io/echoserver:1.4	app: hello-minikube	minikube	Running	0	-	-	5 minutes ago
pod-template-hash: 5c9f5cd89								

Replica Sets

Name	Images	Labels	Pods	Created
hello-minikube-5c9f5cd89	k8s.gcr.io/echoserver:1.4	app: hello-minikube pod-template-hash: 5c9f5cd89	1 / 1	5 minutes ago