

SETUP MINIKUBE AT YOUR LOCAL AND EXPLORE CREATING NAMESPACES

Setup Minikube at local

```
sivathamil@sivathamil: ~/minikube
sivathamil@sivathamil:~$ mkdir minikube
sivathamil@sivathamil:~$ ls
:          IFstatement.sh  codetest          index.html  multiplication.sh  show          terra-f
Dockerfile  aws                    docker-compose.yml  minikube      live            systemandnetworkdetails.sh  test-aws.pem
sivathamil@sivathamil:~$ cd minikube
sivathamil@sivathamil:~/minikube$ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64
stall minikube-linux-amd64 /usr/local/bin/minikube
% Total    % Received % Xferd  Average Speed   Time    Time     Current
           Dload  Upload   Total   Spent    Left     Speed
100 89.3M  100 89.3M    0     0  8936k      0  0:00:10  0:00:10 --:--:-- 10.2M
sivathamil@sivathamil:~/minikube$ sudo install minikube-linux-amd64 /usr/local/bin/minikube
[sudo] password for sivathamil:
sivathamil@sivathamil:~/minikube$ minikube start
❯ minikube v1.32.0 on Ubuntu 22.04 (amd64)
❯ Automatically selected the docker driver. Other choices: none, ssh
❯ Using Docker driver with root privileges
❯ Starting control plane node minikube in cluster minikube
❯ Pulling base image ...
❯ Downloading Kubernetes v1.28.3 preload ...
> preloaded-images-k8s-v18-v1...: 403.35 MiB / 403.35 MiB 100.00% 5.26 Mi
> gcr.io/k8s-minikube/kicbase...: 453.90 MiB / 453.90 MiB 100.00% 5.44 Mi
❯ Creating docker container (CPUs=2, Memory=2200MB) ...
❯ Preparing Kubernetes v1.28.3 on Docker 24.0.7 ...
  ▪ Generating certificates and keys ...
  ▪ Booting up control plane ...
  ▪ Configuring RBAC rules ...
❯ Configuring bridge CNI (Container Networking Interface) ...
  ▪ Using image gcr.io/k8s-minikube/storage-provisioner:v5
❯ Verifying Kubernetes components...
❯ Enabled addons: storage-provisioner, default-storageclass
❯ kubectl not found. If you need it, try: 'minikube kubectl -- get pods -A'
❯ Done! kubectl is now configured to use "minikube" cluster and "default" namespace by default
sivathamil@sivathamil:~/minikube$ kubectl get po -A
Command 'kubectl' not found, but can be installed with:
sudo snap install kubectl
sivathamil@sivathamil:~/minikube$ sudo kubectl get po -A
sudo: kubectl: command not found
sivathamil@sivathamil:~/minikube$ minikube kubectl -- get po -A

> kubectl.sha256: 64 B / 64 B [-----] 100.00% ? p/s 0s
> kubectl: 47.56 MiB / 47.56 MiB [-----] 100.00% 1.21 MiB p/s 39s
NAMESPACE   NAME                                READY   STATUS    RESTARTS   AGE
kube-system  coredns-5dd5756b68-hz6dc           1/1     Running   0           2m59s
kube-system  etcd-minikube                      1/1     Running   0           3m13s
kube-system  kube-apiserver-minikube            1/1     Running   0           3m11s
kube-system  kube-controller-manager-minikube   1/1     Running   0           3m12s
kube-system  kube-proxy-6qkp7                   1/1     Running   0           2m59s
kube-system  kube-scheduler-minikube            1/1     Running   0           3m13s
kube-system  storage-provisioner                1/1     Running   1 (2m28s ago) 3m8s
sivathamil@sivathamil:~/minikube$
```

Minikube Status

```
sivathamil@sivathamil: ~/minikube
sivathamil@sivathamil:~/minikube$ minikube dashboard
  Verifying dashboard health ...
  Launching proxy ...
  Verifying proxy health ...
  Opening http://127.0.0.1:46009/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/ in your default browser...
  http://127.0.0.1:46009/api/v1/namespaces/kubernetes-dashboard/services/http:kubernetes-dashboard:/proxy/

^C
sivathamil@sivathamil:~/minikube$ minikube status
minikube
type: Control Plane
host: Running
kubelet: Running
apiserver: Running
kubeconfig: Configured


sivathamil@sivathamil:~/minikube$ kubectl get nodes
NAME        STATUS    ROLES    AGE   VERSION
minikube    Ready     control-plane   21m   v1.28.3

sivathamil@sivathamil:~/minikube$ kubectl get pods --all-namespaces
NAMESPACE   NAME                                     READY   STATUS    RESTARTS   AGE
kube-system   coredns-5dd5756b68-hz6dc              1/1     Running   0          21m
kube-system   etcd-minikube                         1/1     Running   0          21m
kube-system   kube-apiserver-minikube               1/1     Running   0          21m
kube-system   kube-controller-manager-minikube      1/1     Running   0          21m
kube-system   kube-proxy-6qkp7                      1/1     Running   0          21m
kube-system   kube-scheduler-minikube               1/1     Running   0          21m
kube-system   storage-provisioner                   1/1     Running   1 (21m ago)  21m
kubernetes-dashboard   dashboard-metrics-scraper-7fd5cb4ddc-rxsgx  1/1     Running   0          16m
kubernetes-dashboard   kubernetes-dashboard-8694d4445c-ftkk7      1/1     Running   0          16m
sivathamil@sivathamil:~/minikube$ touch namespace-taskzen.yaml
sivathamil@sivathamil:~/minikube$ vi namespace-taskzen.yaml
sivathamil@sivathamil:~/minikube$ kubectl apply -f namespace-taskzen.yaml
namespace/taskzen-namespaced created
sivathamil@sivathamil:~/minikube$ kubectl get namespaces
NAME                STATUS   AGE
default             Active   26m
kube-node-lease     Active   26m
kube-public          Active   26m
kube-system          Active   26m
kubernetes-dashboard Active   20m
taskzen-namespaced  Active   22s
sivathamil@sivathamil:~/minikube$ ls
minikube-linux-amd64 namespace-taskzen.yaml
sivathamil@sivathamil:~/minikube$ cat namespace-taskzen.yaml
apiVersion: v1
kind: Namespace
metadata:
  name: taskzen-namespaced
sivathamil@sivathamil:~/minikube$ touch task-namespaced-nginx.yaml
```

Creating Namespaces

```
sivathamil@sivathamil:~/minikube$ touch namespace-taskzen.yaml
sivathamil@sivathamil:~/minikube$ vi namespace-taskzen.yaml
sivathamil@sivathamil:~/minikube$ kubectl apply -f namespace-taskzen.yaml
namespace/taskzen-namespace created
sivathamil@sivathamil:~/minikube$ kubectl get namespaces
NAME                STATUS    AGE
default             Active    26m
kube-node-lease     Active    26m
kube-public         Active    26m
kube-system         Active    26m
kubernetes-dashboard Active    20m
taskzen-namespace   Active    22s
sivathamil@sivathamil:~/minikube$ ls
minikube-linux-amd64 namespace-taskzen.yaml
sivathamil@sivathamil:~/minikube$ cat namespace-taskzen.yaml
apiVersion: v1
kind: Namespace
metadata:
  name: taskzen-namespace
sivathamil@sivathamil:~/minikube$ touch task-namespase-nginx.yaml
sivathamil@sivathamil:~/minikube$ vi task-namespase-nginx.yaml
```

Deploy Resources to the Namespace

 sivathamil@sivathamil: ~/minikube

```
sivathamil@sivathamil:~/minikube$ kubectl create deployment nginx --image=nginx --namespace=taskzen-namespace
deployment.apps/nginx created
```

```
sivathamil@sivathamil:~/minikube$ kubectl get pods -n taskzen-namespace
```

NAME	READY	STATUS	RESTARTS	AGE
nginx-7854ff8877-qtn24	1/1	Running	0	65s

```
sivathamil@sivathamil:~/minikube$ kubectl get pods --all-namespaces
```

NAMESPACE	NAME	READY	STATUS	RESTARTS	AGE
kube-system	coredns-5dd5756b68-hz6dc	1/1	Running	0	104m
kube-system	etcd-minikube	1/1	Running	0	104m
kube-system	kube-apiserver-minikube	1/1	Running	0	104m
kube-system	kube-controller-manager-minikube	1/1	Running	0	104m
kube-system	kube-proxy-6qkp7	1/1	Running	0	104m
kube-system	kube-scheduler-minikube	1/1	Running	0	104m
kube-system	storage-provisioner	1/1	Running	1 (103m ago)	104m
kubernetes-dashboard	dashboard-metrics-scraper-7fd5cb4ddc-rxsqx	1/1	Running	0	98m
kubernetes-dashboard	kubernetes-dashboard-8694d4445c-ftkk7	1/1	Running	0	98m
taskzen-namespace	nginx-7854ff8877-qtn24	1/1	Running	0	2m38s

```
sivathamil@sivathamil:~/minikube$ kubectl get namespaces
```

NAME	STATUS	AGE
default	Active	105m
kube-node-lease	Active	105m
kube-public	Active	105m
kube-system	Active	105m
kubernetes-dashboard	Active	99m
taskzen-namespace	Active	79m

```
sivathamil@sivathamil:~/minikube$ kubectl get nodes
```

NAME	STATUS	ROLES	AGE	VERSION
minikube	Ready	control-plane	106m	v1.28.3

```
sivathamil@sivathamil:~/minikube$
```

Comment in Minikube And Namespace

MINIKUBE LINUX	NAMESPACE
<ul style="list-style-type: none">✓ curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64✓ sudo install minikube-linux-amd64 /usr/local/bin/minikube✓ minikube start✓ minikube kubectl -- get po -A✓ minikube status✓ kubectl get nodes	<ul style="list-style-type: none">➤ Touch testnamespace.yaml apiVersion: v1 kind: Namespace metadata: name: test-namespace➤ kubectl apply -f testnamespace.yaml➤ kubectl get namespaces➤ Deploy Resources to the Namespace kubectl create deployment nginx -- image=nginx --namespace=test-namespace

Thank You.....