



# KUBERNETES



# MINIKUBE

- Download and install from <https://kubernetes.io/fr/docs/tasks/tools/install-minikube/>

```
minikube start --driver=docker  
minikube kubectl -- get ns
```

```
docker network ls ← inspect network minikube
```

```
"IPv4Address": "192.168.49.2/24"
```

```
aureliano@aureliano-HP-EliteBook-1050-G1 ~ $ minikube node list  
minikube 192.168.49.2
```

# KUBECTL

Kubectl est un outil en ligne de commande pour contrôler des clusters Kubernetes. kubectl recherche un fichier appelé config dans le répertoire \$HOME/.kube. Vous pouvez spécifier d'autres fichiers [kubeconfig] (<https://kubernetes.io/docs/concepts/configuration/organize-cluster-access-kubeconfig/>) en définissant la variable d'environnement KUBECONFIG ou en utilisant le paramètre **--kubeconfig**

Utilisez la syntaxe suivante pour exécuter des commandes kubectl depuis votre fenêtre de terminal :

**kubectl** [commande] [TYPE] [NOM] [flags]

où commande, TYPE, NOM et flags sont :

**commande**: Indique l'opération que vous désirez exécuter sur une ou plusieurs ressources, par exemple create, get, describe, delete.

```
$ kubectl get ns
```

```
$ kubectl get pod pod1
```

```
$ kubectl describe pod pod1
```

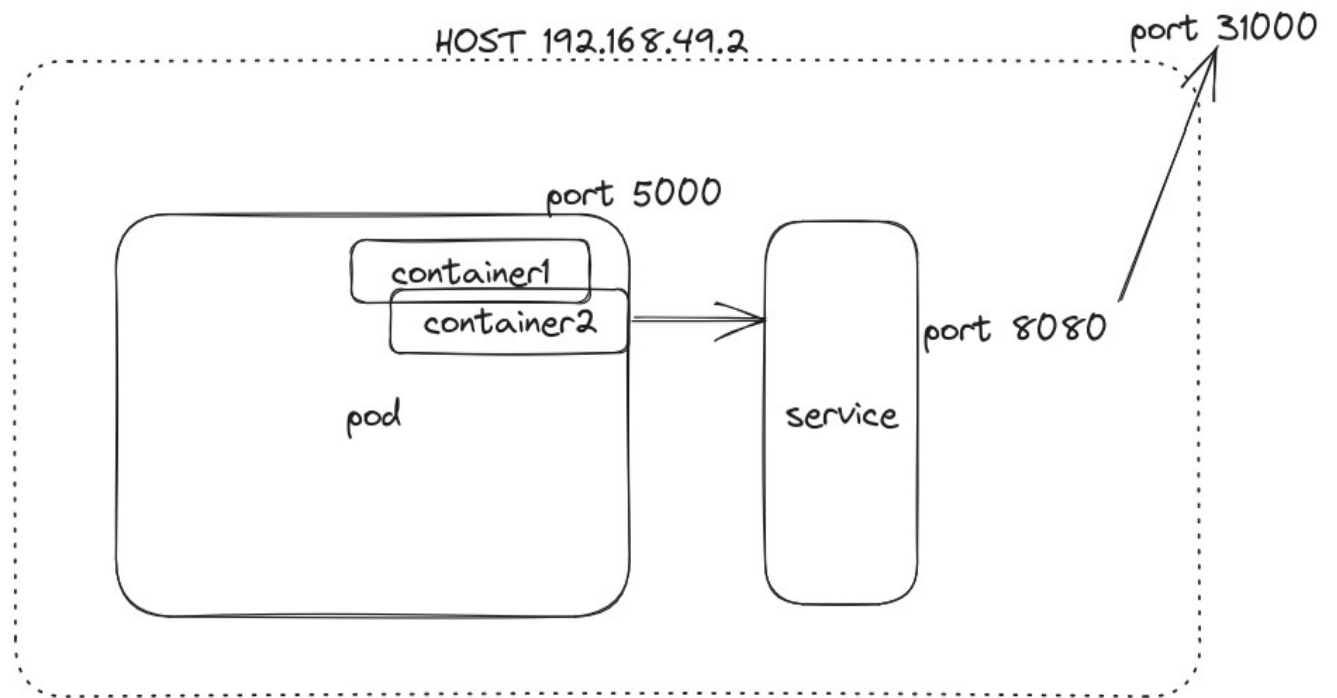
Download and install from <https://kubernetes.io/docs/tasks/tools/>

# HELLOWORLD

`kubectl apply -f hello-world.yaml`

Access webapp on:

**`http://192.168.49.2:31000/`**



<https://github.com/ynov-campus-sophia/conteneurisation/k8s/helloworld>

# DOCTL

- Download and install from <https://docs.digitalocean.com/reference/doctl/how-to/install/>

Set access token in env var and check if everything ok:

```
export DIGITALOCEAN_ACCESS_TOKEN =  
dop_v1_afdab7b51e5b99903102012667795865474f32a51921021e20cac79f38d6515a
```

```
aureliano@aureliano-HP-EliteBook-1050-G1 ~ $ doctl kubernetes cluster list
```

```
doctl compute droplet list
```

ID	Name	Public IPv4	Private IPv4	Public IPv6	Memory	VCPUs	Disk	Region	Image	VPC
UUID		Status	Tags	Features		Volumes				
379700068	ynov	146.190.16.168	10.110.0.2		8192	4	160	ams3	Debian 12 x64	
12bc9ac2-284a-4cba-a948-b59982dd19db		active								

# OPENLENS

Download and install from  
<https://github.com/MuhammedKalkan/OpenLens/releases/tag/v6.5.2-366>

- Clusters:

The screenshot displays the OpenLens application interface. On the left is a sidebar with a 'Catalog' section containing 'Browse', 'General', 'Clusters' (selected), and 'Web Links'. The main area shows a table of clusters under the heading 'Clusters' with a search bar and '9 items'.

Name	Source	Labels	Version	Distro	Status
AW1 arn:aws:eks:eu-west-1:296980938756:cluster/mdm-preprod-quartz	local	file=~/.kube/config	v1.22.17-eks-ec5523e	eks	disconnected
AW3 arn:aws:eks:eu-west-3:296980938756:cluster/mdm-dev-quartzv2	local	file=~/.kube/config	v1.23.17-eks-2d98532	eks	disconnected
AW3 arn:aws:eks:eu-west-3:296980938756:cluster/mdm-devenv-build	local	file=~/.kube/config			disconnected
KMP k8saas-mydatamodel-prod	local	file=~/.kube/config			disconnected
KMS k8saas-mydatamodel-sandbox	local	file=~/.kube/config			disconnected
MI minikube	local	file=~/.kube/config			disconnected
MY mydatamodels	local	file=~/.kube/config-mydatamoc			disconnected
KMP k8saas-mydatamodel-prod	local	file=~/.kube/config-mydatamoc			disconnected
MI microk8s	local	file=~/.kube/microk8sconfig			disconnected

# OPENLENS

- Nodes:

arn:aws:eks:eu-west-1:296980938...

Cluster

Nodes

Workloads

Overview

Pods

Deployments

DaemonSets

StatefulSets

ReplicaSets

Replication Controllers

Jobs

CronJobs

Config

Network

Storage

Persistent Volume Claims

Persistent Volumes

Storage Classes

Namespaces

Nodes 9 items

Name	CPU	Memory	Disk	Taints	Roles	Version	Age
ip-10-1-10-21.eu-west-1.compute.i...				0		v1.23.17-eks-43...	21d
ip-10-1-16-28.eu-west-1.compute.i...				0		v1.23.17-eks-43...	2d3h
ip-10-1-18-84.eu-west-1.compute.inte				0		v1.23.17-eks-43...	16d
ip-10-1-2-189.eu-west-1.compute.i...				0		v1.23.17-eks-43...	7h23m
ip-10-1-21-79.eu-west-1.compute.i...				0		v1.23.17-eks-43...	22d
ip-10-1-31-26.eu-west-1.compute.i...				0		v1.23.17-eks-43...	6h38m
ip-10-1-5-147.eu-west-1.compute.i...				0		v1.23.17-eks-43...	21d
ip-10-1-8-74.eu-west-1.compute.in...				0		v1.23.17-eks-43...	22d
ip-10-1-9-228.eu-west-1.compute.i...				0		v1.23.17-eks-43...	6h39m

# OPENLENS

- Pods:

The screenshot displays the OpenLens interface for a Kubernetes cluster. The left sidebar shows the navigation menu with 'Workloads' selected, and 'Pods' highlighted under the 'Workloads' section. The main panel shows the 'Pods' page for the 'quartzv2' namespace, displaying a list of 112 items. The table columns include Name, Namespace, Containers, Restarts, Controlled By, Node, QoS, Age, Status, and a menu icon. The pods listed are:

Name	Namespace	Containers	Restarts	Controlled By	Node	QoS	Age	Status
airflow-scheduler-868cc45d59-f6lkb	quartzv2	3	0	ReplicaSet	ip-10-1-16-28.eu-we	Burstable	13h	Running
airflow-web-67f9f9c89-7w5zl	quartzv2	3	0	ReplicaSet	ip-10-1-2-189.eu-we	Burstable	7h27m	Running
airflow-web-67f9f9c89-tv74r	quartzv2	3	0	ReplicaSet	ip-10-1-18-84.eu-we	Burstable	7h28m	Running
airflow-worker-0	quartzv2	3	0	StatefulSet	ip-10-1-2-189.eu-we	Burstable	7h26m	Running
airflow-worker-1	quartzv2	3	0	StatefulSet	ip-10-1-31-26.eu-we	Burstable	6h38m	Running
api-54d8c4d5cf-gthtt	quartzv2	1	0	ReplicaSet	ip-10-1-18-84.eu-we	BestEffort	7h28m	Running
continuous-image-puller-bg5nb	quartzv2	3	0	DaemonSet	ip-10-1-31-26.eu-we	BestEffort	6h41m	Running
continuous-image-puller-drc7g	quartzv2	3	0	DaemonSet	ip-10-1-2-189.eu-we	BestEffort	7h26m	Running
continuous-image-puller-ggnkq	quartzv2	3	0	DaemonSet	ip-10-1-16-28.eu-we	BestEffort	2d3h	Running
continuous-image-puller-jqc9f	quartzv2	3	0	DaemonSet	ip-10-1-10-21.eu-we	BestEffort	18d	Running
continuous-image-puller-mqrzd	quartzv2	3	0	DaemonSet	ip-10-1-18-84.eu-we	BestEffort	16d	Running
continuous-image-puller-pvd2c	quartzv2	3	0	DaemonSet	ip-10-1-9-228.eu-we	BestEffort	6h42m	Running
hub-7877b6886c-w4798	quartzv2	1	0	ReplicaSet	ip-10-1-10-21.eu-we	Burstable	8d	Running
juicefs-s3-gateway-5d4888b6bc-6xfrm	quartzv2	2	0	ReplicaSet	ip-10-1-9-228.eu-we	Burstable	10m	Running
juicefs-s3-gateway-5d4888b6bc-p7tfk	quartzv2	2	0	ReplicaSet	ip-10-1-10-21.eu-we	Burstable	7h12m	Running
jupyter-ingrid	quartzv2	2	0		ip-10-1-31-26.eu-we	Burstable	4h26m	Running
jupyter-luca	quartzv2	2	0		ip-10-1-10-21.eu-we	Burstable	2d7h	Running
minio-5dfb848cdc-zw2sl	quartzv2	1	0	ReplicaSet	ip-10-1-5-147.eu-we	Burstable	21d	Running