

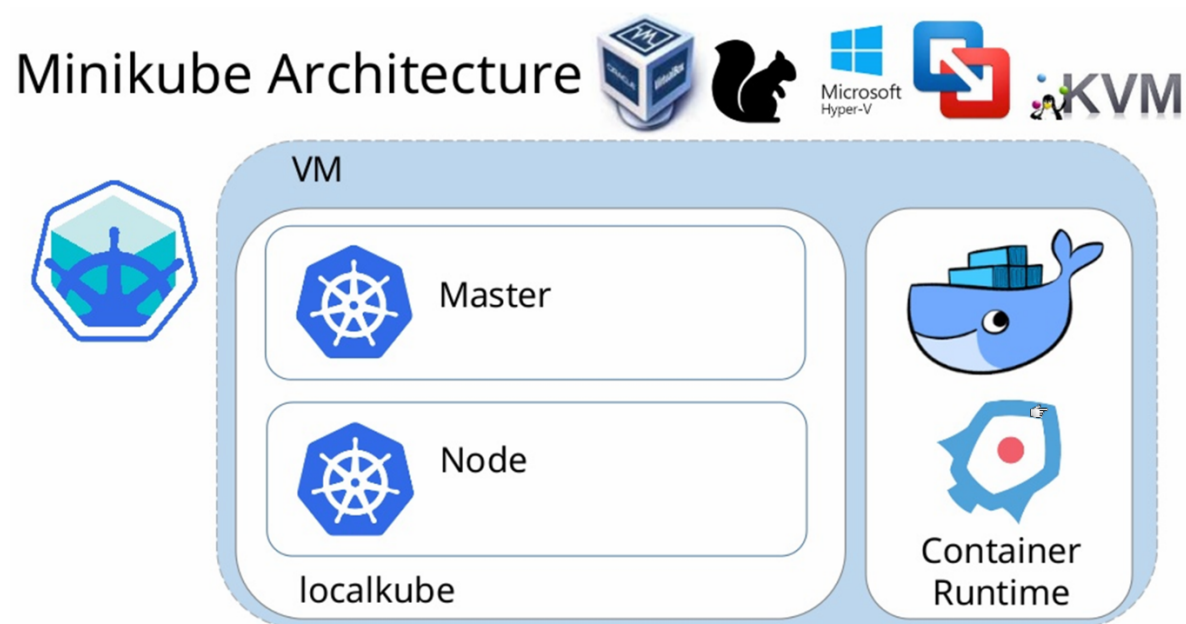
#030 Kubernetes - Minikube

Introduction

this is part 30 from the journey it's a long journey(360 day) so go please check previous parts , and if you need to walk in the journey with me please make sure to follow because I may post more than once in 1 Day but surely I will post daily at least one 😊.

And I will cover lot of tools as we move on.

What is Minikube



Minikube is like an virtual machine contain a Linux operation system and have 1 node as master also in same time as worker.
and you can communicate with it using kubectl using a configuration file.

Install on Linux

```
curl -Lo minikube
https://storage.googleapis.com/minikube/releases/latest/minikube-
linux-amd64 \
&& chmod +x minikube
```

```
sudo mkdir -p /usr/local/bin/  
sudo install minikube /usr/local/bin/
```

this commands will install minikube on Linux , also we need to install kubctl

Download latest version

```
curl -LO https://storage.googleapis.com/kubernetes-  
release/release/`curl -s https://storage.googleapis.com/kubernetes-  
release/release/stable.txt`/bin/linux/amd64/kubect1
```

then make it excutable

```
chmod +x ./kubect1
```

move the excutable to bin so we can access it directly from terminal

```
sudo mv ./kubect1 /usr/local/bin/kubect1
```

to make sure that installation successful

```
kubect1 version --client
```

for other platforms check [minikube](#) and [kubect1](#)

Start the action

first we need to start minikube

```
(base) in ~  
> minikube start --driver=virtualbox  
☺ minikube v1.11.0 on Debian 10.4  
🔧 Using the virtualbox driver based on user configuration  
📡 Downloading VM boot image ...  
> minikube-v1.11.0.iso.sha256: 65 B / 65 B [-----] 100.00% ? p/s 0s  
> minikube-v1.11.0.iso: 174.99 MiB / 174.99 MiB 100.00% 540.32 KiB p/s 5m3  
🔥 Starting control plane node minikube in cluster minikube  
📦 Creating virtualbox VM (CPUs=2, Memory=2200MB, Disk=20000MB) ...  
🔧 Preparing Kubernetes v1.18.3 on Docker 19.03.8 ...  
🔍 Verifying Kubernetes components...  
🌟 Enabled addons: default-storageclass, storage-provisioner  
🔧 Done! kubect1 is now configured to use "minikube"  
(base) in ~  
>
```

```
minikube start --driver=virtualbox
```

I am using driver virtualbox because I got some problem with driver docker , and lazy to fix them.

after successfully starting it. We can see that a cluster have been made , to see it type

```
(base) in ~
> cat ~/.kube/config
apiVersion: v1
clusters:
- cluster:
    certificate-authority: /home/omar/.minikube/ca.crt
    server: https://192.168.99.100:8443
    name: minikube
contexts:
- context:
    cluster: minikube
    user: minikube
    name: minikube
current-context: minikube
kind: Config
preferences: {}
users:
- name: minikube
  user:
    client-certificate: /home/omar/.minikube/profiles/minikube/client.crt
    client-key: /home/omar/.minikube/profiles/minikube/client.key
(base) in ~
>
```

```
cat ~/.kube/config
```

for windows users , it's in c>Users>your_username>.kube>config

We can see we have a cluster with name minikube , and user with name of minikube.

We can setup our own clusters in this file but we are going to do later on this journey.

```
(base) in ~
> kubectl get nodes
NAME          STATUS    ROLES    AGE    VERSION
minikube      Ready     master   6m58s  v1.18.3
(base) in ~
>
```

```
kubectl get nodes
```

We can see that we have minikube ready and it's role is master also workder in same time.