

Kubernetes : Minikube on CentOS 7

Deploy Kubernetes on a developer's workstation.

This example is on CentOS 7 with KVM. It is a VM. To follow along, you'll need metal or nested KVM.

It can be used to develop applications locally and then publish them to OpenShift, GKE or even Azure AKS.

Install the required packages and start libvirt

```
yum -y install qemu-kvm libvirt libvirt-daemon-kvm
systemctl enable --now libvirtd
```

Setup the repo for Kubernetes.

```
cat <<'EOF' > /etc/yum.repos.d/kubernetes.repo
[kubernetes]
name=Kubernetes
baseurl=https://packages.cloud.google.com/yum/repos/kubernetes-el7-$basearch
enabled=1
gpgcheck=1
repo_gpgcheck=1
gpgkey=https://packages.cloud.google.com/yum/doc/yum-key.gpg
https://packages.cloud.google.com/yum/doc/rpm-package-key.gpg
EOF
```

Install Kubectl

```
yum -y install kubectl
```

Download the minikube binary and docker machine driver

```
wget https://storage.googleapis.com/minikube/releases/latest/minikube-linux-amd64 -O minikube
wget https://storage.googleapis.com/minikube/releases/latest/docker-machine-driver-kvm2
chmod 755 minikube docker-machine-driver-kvm2
```

```
mv minikube docker-machine-driver-kvm2 /usr/local/bin/
```

Run a quick minikube check to make sure it's working.

```
minikube version
```

```
minikube version: v1.0.1
```

Run a kubectl check

```
kubectl -o json
```

```
{
  "clientVersion": {
    "major": "1",
    "minor": "14",
    "gitVersion": "v1.14.1",
    "gitCommit": "b7394102d6ef778017f2ca4046abbaa23b88c290",
    "gitTreeState": "clean",
    "buildDate": "2019-04-08T17:11:31Z",
    "goVersion": "go1.12.1",
    "compiler": "gc",
    "platform": "linux/amd64"
  }
}
```

Start minikube

```
minikube start --vm-driver kvm2
```

After the the start command runs, check the status

```
minikube status
```

You should see out put like this.

```
host: Running
kubelet: Running
apiserver: Running
kubectl: Correctly Configured: pointing to minikube-vm at 192.168.39.33
```

Setup the environment

```
minikube docker-env
```

Output will look like this:

```
Kubernetes master is running at https://192.168.39.33:8443
KubeDNS is running at https://192.168.39.33:8443/api/v1/namespaces/kube-system/services/kube-
dns:dns/proxy
```

Log into the minikube

```
minikube ssh
```

Check the docker status

```
docker ps
```

At this point you are in a normal VM shell. All tools work as expected.

To stop minikube.

```
minikube stop
```

To remove minikube, do like follows

```
minikube delete
```

Revision #3

Created 7 May 2019 21:42:52 by Michael Cleary

Updated 17 February 2022 20:12:51 by Michael Cleary