Kubernetes - setup step by step

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From scratch installation On Linux

On Linux

Before beginning, we have to know that kubernetes can be installed on Linux, Windows or Mac and there are a little bit difference between these platfrom. These differences comes from the opérating system. Installing kubernetes on Linux is easy than the others OS.

Kubernetes can be install on cloud or on local machine.

On cloud public you can choose AWS, GCP or Ms AZURE See more - HERE

With Vagrant on local you can use a Virtual Machine to install kubernetes.

Example: 1 master, 2 nodes. so you need to install Vagrant, VBox, and Ansible to deploy configurations

Requirement

1. 1 host to be the MASTER
2. and nodes (1..n)
3. docker
4. swapoff (linux)

on master node

1. install KUBECTL
2. install KUBEADM
3. install network plugins → K8s network plugins

on each pod

when network plugin is correctely installed and launched . you can just add the pod to the master (kubeadm join ....) . copy/paste master join link, which was given after kubeadm installed on master

Install Docker

TIP	how to install Docker on Centos?

IMPORTANT	The following installation will set docker version 18.06.2

1. Install Docker CE
2. Set up the repository:
3. Install packages to allow apt to use a repository over HTTPS

```
apt-get update && apt-get install apt-transport-https ca-certificates curl
software-properties-common
```

4. Add Docker official GPG key

```
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | apt-key add -
```

5. Add Docker apt repository.

```
add-apt-repository \
  "deb [arch=amd64] https://download.docker.com/linux/ubuntu \
  $(lsb_release -cs) \
  stable"
```

6. Install Docker CE.

```
apt-get update && apt-get install docker-ce=18.06.2\~ce\~3-0\~ubuntu
```

7. Setup daemon.

```
cat > /etc/docker/daemon.json <<EOF
{
  "exec-opts": ["native.cgroupdriver=systemd"],
  "log-driver": "json-file",
  "log-opts": {
    "max-size": "100m"
  },
  "storage-driver": "overlay2"
}
```

```
EOF
```

```
mkdir -p /etc/systemd/system/docker.service.d
```

8. Restart docker.

```
systemctl daemon-reload
systemctl restart docker
```

My custom configurations

TIP My configuration to install kubernetes:

1. install kubernetes on VM ici
2. utils (git alias, docker alias, kubernetes alias, ZSH, ENV,...) ici

Those are:

1. setup.sh : main of the programme
2. k8s.sh : script sh to install Kubernetes
3. confiVagrant.sh : script to install Docker, Docker-compose and Ansible

Gestion Management (gestionnaire de configuration)

Ansible

[ansible]