

TerraformKind





https://github.com/Yunor743/TerraformKind

main ▾

1 branch

0 tags

Go to file

Add file ▾

Code ▾

Hugo PERINAZZO fix: update Readme

47f62b4 on Oct 24, 2021 5 commits

📁 DockerImg	fix: update Readme	11 months ago
📄 .gitignore	feat: Create main.tf, DockerImg & README.md	11 months ago
📄 .terraform.lock.hcl	feat: Create main.tf, DockerImg & README.md	11 months ago
📄 LICENSE	Initial commit	11 months ago
📄 README.md	fix: update Readme	11 months ago
📄 main.tf	fix: update Readme	11 months ago



Usage:

Disable the swap and clone the repository:

sudo swapoff -a;

git clone <https://github.com/Yunor743/TerraformKind.git>;

cd TerraformKind;

```
talion@pluton TerraformKind (main) [1]> sudo swapon -s
[sudo] password for talion:
Filename                                Type              Size      Used      Priority
/dev/dm-2                              partition         999420    506368    -2
talion@pluton TerraformKind (main)> sudo swapoff -a
talion@pluton TerraformKind (main)> sudo swapon -s
talion@pluton TerraformKind (main)> █
```

Usage:

Create the infrastructure:

terraform init

terraform apply

Warning: Deprecated attribute

```
on main.tf line 33, in resource "docker_container" "kube-master":
33:   image      = docker_image.k8snode.latest
```

The attribute "latest" is deprecated. Refer to the provider documentation for details.

(and 5 more similar warnings elsewhere)

Apply complete! Resources: 4 added, 0 changed, 0 destroyed.

talton@pluton: TerraformK8ind (main)> docker ps -a

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
e4d54a256e61	f128c238f09e	"/sbin/init"	58 seconds ago	Up 56 seconds		kube-worker-2
9370f923c9d6	f128c238f09e	"/sbin/init"	58 seconds ago	Up 56 seconds		kube-worker-1
9151b7aadd0a	f128c238f09e	"/sbin/init"	58 seconds ago	Up 56 seconds		kube-master

Usage:

For each terraformkind-k8snode container, install a Container Network Interface (CNI):

```
docker exec -it [container name] bash
```

```
mkdir -p /run/flannel && cp /root/subnet.env /run/flannel/
```

(If one of your nodes reboot you have to re-enter this command)



build passing

Flannel is a simple and easy way to configure a layer 3 network fabric designed for Kubernetes.

```
talion@pluton TerraformKind (main)> docker exec -it kube-worker-1 sh
# mkdir -p /run/flannel && cp /root/subnet.env /run/flannel/
#
# ls /run/flannel
subnet.env
#
```

<https://github.com/flannel-io/flannel>

Usage:

Init control-plane on the master node:

`docker exec -it kube-master bash`

`kubeadm init --ignore-preflight-errors=all --pod-network-cidr=10.244.0.0/16`

```
Your Kubernetes control-plane has initialized successfully!
```

```
To start using your cluster, you need to run the following as a regular user:
```

```
mkdir -p $HOME/.kube
sudo cp -i /etc/kubernetes/admin.conf $HOME/.kube/config
sudo chown $(id -u):$(id -g) $HOME/.kube/config
```

```
You should now deploy a pod network to the cluster.
```

```
Run "kubectl apply -f [podnetwork].yaml" with one of the options listed at:
https://kubernetes.io/docs/concepts/cluster-administration/addons/
```

```
Then you can join any number of worker nodes by running the following on each as root:
```

```
kubeadm join 192.168.0.1:6443 --token xi9p3n.3xbhvk39xdc9hwdn \
--discovery-token-ca-cert-hash sha256:6201ba364bd3dfb74367c440c7fef857144c7f801fc81d1569746c3e6fcbc42
root@kube-master:/#
```

Use this command to join
workers node to the master

You can retrieve a new token with:
`kubeadm token create --print-join-command`

Learn more about control-plane :

https://en.wikipedia.org/wiki/Control_plane



Usage:

Join workers to the cluster.

For each worker enter the following command:

```
kubeadm --ignore-preflight-errors=all join <IP>:6443 --token <TOKEN>  
--discovery-token-ca-cert-hash sha256:<CA-HASH>
```

Note that the flag `--ignore-preflight-errors=all` has been added to the command given



Usage:

Copy the master configuration to you host (or another machine)

```
mkdir -p $HOME/kube
```

```
docker cp kube-master:/etc/kubernetes/admin.conf $HOME/kube/config
```

Add the flannel CNI plugin to your host machine kubectl

```
kubectl apply -f https://raw.githubusercontent.com/coreos/flannel/master/Documentation/kube-flannel.yml
```




Your cluster is ready !

You now have a cluster composed of one master and two workers !

```
talion@pluton TerraformKind (main) [1]> kubectl get node
NAME          STATUS    ROLES    AGE    VERSION
kube-master   NotReady  master   7m35s  v1.19.16
kube-worker-1 NotReady  <none>    6m55s  v1.19.16
kube-worker-2 NotReady  <none>    6m30s  v1.19.16
talion@pluton TerraformKind (main)> kubectl get node
NAME          STATUS    ROLES    AGE    VERSION
kube-master   Ready     master   8m13s  v1.19.16
kube-worker-1 Ready     <none>    7m33s  v1.19.16
kube-worker-2 Ready     <none>    7m8s   v1.19.16
talion@pluton TerraformKind (main)> █
```

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