安装k8s-v1.20.15

新的linux内核已经和低版本不兼容了，本文不在有效和维护

选择高可用方案

- 使用kube-vip https://iovhm.com/book/books/k8s/page/kube-vipk8s
- 使用keepalived https://iovhm.com/book/books/42e7a/page/dockers-composekeepalived

kube-vip方案首先要**k8s**部署虚拟出虚拟IP，在集群出现故障后可能导致不好排除问题，优选

开始安装

```
# 修改主机名

hostnamectl set-hostname 5-10.vpclub.local

# 修改hosts文件，将所有节点加入，为了便于后续扩展，建议为master单独增加一个主机名: kube-api-server

vi /etc/hosts
192.168.5.10    5-10.vpclub.local
192.168.5.10 kube-api-server


# 下载 k8s 安装文件
# 查看k8s 最新版本 https://dl.k8s.io/release/stable.txt
# 或者从google网站下载
# curl -LO "https://dl.k8s.io/release/$(curl -L -s
https://dl.k8s.io/release/stable.txt)/bin/linux/amd64/kubectl"


# 三个主程序

wget iovhm.com/uploads/software/k8s/v1.20.15/kubeadm
```

```
wget iovhm.com/uploads/software/k8s/v1.20.15/kubelet
wget iovhm.com/uploads/software/k8s/v1.20.15/kubectl

# docker-compose

wget iovhm.com/uploads/software/k8s/docker-compose

# □□□□□□

wget iovhm.com/uploads/software/k8s/v1.20.15/10-kubeadm.conf
wget iovhm.com/uploads/software/k8s/v1.20.15/kubelet.service

# □□
wget iovhm.com/uploads/software/k8s/v1.20.15/calico.yaml
wget iovhm.com/uploads/software/k8s/v1.20.15/traefik-ingress.tar

# cni□□□□□□□□
wget iovhm.com/uploads/software/k8s/v1.20.15/calico-image-vp-whdev.yaml


# □□□□□□□□ /usr/local/bin □□□□□□□

chmod 777 kubeadm kubelet kubectl docker-compose
cp kubeadm kubelet kubectl docker-compose /usr/local/bin

# □□ socat conntrack □□□□

yum install -y socat
yum install -y conntrack



# □□docker □□□docke□□□□

vi /etc/docker/daemon.json

{
        "graph":"/data/docker",
        "exec-opts": ["native.cgroupdriver=systemd"]
}
```

```
# 安装kubelet服务，开启服务自启动
# 需要注意 服务文件里面的执行路径

cp kubelet.service /usr/lib/systemd/system/kubelet.service
mkdir -p /etc/systemd/system/kubelet.service.d
cp 10-kubeadm.conf  /etc/systemd/system/kubelet.service.d

# 设置kubelet 开机启动服务
systemctl enable kubelet.service
systemctl status kubelet
```

多master安装（推荐，后期便于扩展多节点，前期也可以单节点使用）

```
# 使用kubeadm 安装
# 1.24.0 以前安装方法，会自动使用docker
# 为了便于扩展，建议apiserver 使用主机名：kube-api-server:6443

kubeadm init --control-plane-endpoint "kube-api-server:6443" --image-repository
registry.aliyuncs.com/google_containers --upload-certs --kubernetes-version v1.20.15   --pod-
network-cidr 10.244.0.0/16  --v   5

# 打印其他master 加入节点命令
echo "$(kubeadm token create --print-join-command) --control-plane --certificate-key $(kubeadm
init phase upload-certs --upload-certs |  tail -1)"

# 打印node加入节点命令

kubeadm token create --print-join-command
```

单master https://jovhm.com/book/books/k8s/page/k8s-ZsW

```
# 单机安装（不推荐）
kubeadm init --image-repository registry.aliyuncs.com/google_containers  --apiserver-
advertise-address 192.168.5.10 --kubernetes-version v1.20.15   --pod-network-cidr
10.244.0.0/16  --v   5
```

```
# □□□□□□
kubeadm reset
```

```
# □□□ipvs□□
# 40□ , □□□□54□□mode: "ipvs"
kubectl edit cm -n kube-system kube-proxy

# □□cni□□□□

kubectl apply -f calico.yaml
```

□□ingress-controller

□□□□traefi-ingress□□**nginx-ingress** □□□□

```
# □□nginx-ingress
wget iovhm.com/uploads/software/k8s/v1.20.15/nginx-ingress/nginx-ingress.yaml

kubectl apply -f nginx-ingress.yaml
```

```
# □□ traefik-controller

kubeclt apply -f 00-account.yaml -n kube-system
kubeclt apply -f 01-role.yaml -n kube-system
kubeclt apply -f 02-role-binding.yaml -n kube-system
kubeclt apply -f 03-traefik.yaml -n kube-system
kubeclt apply -f 04-traefik-services.yaml -n kube-system
kubeclt apply -f 05-traefik-default-tls.yaml -n kube-system

# □□□□□□
# □□□□□□□□□□□□□□□□
# kubeadm token create --print-join-command
```

k8s [illegible] https://iovhm.com/book/books/k8s/page/k3srancher

[illegible]

https://iovhm.com/book/books/k8s/page/k8s-Si0

[illegible]

```
# [illegible]
# vi /var/lib/kubelet/kubeadm-flags.env
# --max-pods=50



# pod[illegible]ping[illegible]
# kubectl edit cm -n kube-system kube-proxy
# 40[illegible]mode:"ipvs"
# [illegible]k8s[illegible]



k8s[illegible]pod ping[illegible]kube-proxy[illegible]ipvs[illegible]iptables[illegible]kube-proxy

# [illegible]: [illegible] controller-manager [illegible]
# [illegible]: [illegible] scheduler [illegible]
# [illegible]
vi /etc/kubernetes/manifests/kube-controller-manager.yaml
vi /etc/kubernetes/manifests/kube-scheduler.yaml
# [illegible] --port=0



# calico-node [illegible] calico/node is not ready: BIRD is not ready: BGP not established
# calico-node [illegible]
# [illegible], [illegible]eth0[illegible]
IP_AUTODETECTION_METHOD  =[illegible]interface=eth0

# [illegible]IP[illegible]
IP_AUTODETECTION_METHO   =  can-reach=192.168.0.254

# traefik-ingress [illegible]
# traefik [illegible]ingressendpoint.hostname[illegible]ingressendpoint.hostname[illegible]
```

```
# □□□□□□□□□□□□□□□□□ --providers.kubernetesingress.ingressendpoint.publishedService

 --providers.kubernetesingress.ingressendpoint.hostname=park.vpclub.io
 --providers.kubernetesingress.ingressendpoint.ip=0.0.0.0

# calico-kube-controllers □□
# □□Failed to write status error=open /status/status.json: permission denied
# □□□□□□□□□
# □□□□/var/run/calico/status □□□□□ 777□□□□□□ /status
# □□□□□□□□□□□

# load balance L4 □□□□ pedding
# load balance □□□□□□k8s□□□□□□□□□□□□□ nodeport □□ hostport
# □□□□□□traefik □□□□□□□□□□DaemonSet □□□□ host□□□□

# □□□kube-proxy□□coredns□□
kubeadm init phase addon kube-proxy --kubeconfig ~/.kube/config --control-plane-endpoint
"kube-api-server:6443" --image-repository registry.aliyuncs.com/google_containers  --
kubernetes-version v1.28.0   --pod-network-cidr 10.244.0.0/16
```

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