



链滴

# kubeadm 安装 k8s v1.13.1 HA 详细教程之 四：安装 node

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# 安装配置node节点（所有node节点同样的操作）

## 1.拉取相应的镜像

```
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/kube-apiserver:v1.13.1
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/kube-controller-manager:v1.13.1
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/kube-scheduler:v1.13.1
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/kube-proxy:v1.13.1
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/pause:3.1
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/etcd:3.2.24
docker pull registry.cn-hangzhou.aliyuncs.com/google_containers/coredns:1.2.6
```

```
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/kube-apiserver:v1.13.1 k8s.gcr.io/kube-apiserver:v1.13.1
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/kube-controller-manager:v1.13.1 k8s.gcr.io/kube-controller-manager:v1.13.1
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/kube-scheduler:v1.13.1 k8s.gcr.io/kube-scheduler:v1.13.1
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/kube-proxy:v1.13.1 k8s.gcr.io/kube-proxy:v1.13.1
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/pause:3.1 k8s.gcr.io/pause:3.1
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/etcd:3.2.24 k8s.gcr.io/etcd:3.2.24
docker tag registry.cn-hangzhou.aliyuncs.com/google_containers/coredns:1.2.6 k8s.gcr.io/coredns:1.2.6
```

## 2.执行加入语句，把node加入集群

```
kubeadm join k8s-cluster.smile13.com:6443 --token mk3jfk.tducuowrll39qun8 --discovery-token-ca-cert-hash sha256:a66bb6ff4f065bfc7918c67832f56892071575af0c2039aff20a4fcf25244af
```

###忘记token或者token过期，需要重新生成token：

```
>1.在master上执行命令：kubeadm token create
>2.获取ca证书`sha256`编码hash值:openssl x509 -pubkey -in /etc/kubernetes/pki/ca.crt | openssl rsa -pubin -outform der 2>/dev/null | openssl dgst -sha256 -hex | sed 's/^.* //'
```

## 3.移除Node

##在master节点上执行：

```
kubectl drain k8s07 --delete-local-data --force --ignore-daemonsets
kubectl delete node k8s07
```

##在k8s07上

```
kubeadm reset
ifconfig cni0 down
ip link delete cni0
ifconfig flannel.1 down
ip link delete flannel.1 rm -rf /var/lib/cni/
```

```
##在其他节点上执行
kubectl delete node k8s07
```

## 4.kube-proxy开启ipvs(任意一个master上操作)

```
##修改ConfigMap的kube-system/kube-proxy中的config.conf, mode: "ipvs"
[root@k8s01 ~]# kubectl edit cm kube-proxy -n kube-system
```

```
##重启所有的kube-proxy pod
[root@k8s01 ~]# kubectl get pod -n kube-system | grep kube-proxy | awk '{system("kubectl
delete pod "$1" -n kube-system")}'
pod "kube-proxy-8r9bq" deleted
pod "kube-proxy-9k2zn" deleted
pod "kube-proxy-bv2bf" deleted
pod "kube-proxy-rkww8" deleted
pod "kube-proxy-sq4lt" deleted
pod "kube-proxy-tvhkx" deleted
pod "kube-proxy-x6v57" deleted
```

```
##查看kube-proxy状态
[root@k8s01 ~]# kubectl get pod -n kube-system | grep kube-proxy
kube-proxy-5r7fp          1/1    Running 0    31s
kube-proxy-895rz         1/1    Running 0    23s
kube-proxy-ggkrw         1/1    Running 0    19s
kube-proxy-gszff         1/1    Running 0    35s
kube-proxy-jl552         1/1    Running 0    60s
kube-proxy-n72bp         1/1    Running 0    83s
kube-proxy-pr7f9         1/1    Running 0    72s
```

```
[root@k8s01 ~]# kubectl logs kube-proxy-5r7fp -n kube-system
I0119 15:44:25.451787    1 server_others.go:189] Using ipvs Proxier.
W0119 15:44:25.452270    1 proxier.go:365] IPVS scheduler not specified, use rr by default
I0119 15:44:25.452458    1 server_others.go:216] Tearing down inactive rules.
I0119 15:44:25.503432    1 server.go:464] Version: v1.13.1
I0119 15:44:25.511221    1 conntrack.go:52] Setting nf_conntrack_max to 131072
I0119 15:44:25.511419    1 config.go:202] Starting service config controller
I0119 15:44:25.511433    1 controller_utils.go:1027] Waiting for caches to sync for service co
fig controller
I0119 15:44:25.511457    1 config.go:102] Starting endpoints config controller
I0119 15:44:25.511518    1 controller_utils.go:1027] Waiting for caches to sync for endpoints
config controller
I0119 15:44:25.611687    1 controller_utils.go:1034] Caches are synced for service config con
roller
I0119 15:44:25.611695    1 controller_utils.go:1034] Caches are synced for endpoints config
ontroller
```

```
##日志中打印出了Using ipvs Proxier, 说明ipvs模式已经开启。
```