

microk8s 入門

author: Uncle Dragon
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Uncle Dragon

安装:

配置

设置用户组

设置镜像加速:

拉取镜像:

完成

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安装:

```
1 | snap install microk8s --classic --channel=1.21
```

配置

设置用户组

```
1 | sudo usermod -a -G microk8s $USER
2 | sudo chown -f -R $USER ~/.kube
```

设置镜像加速:

```
1 | vi /var/snap/microk8s/current/args/containerd-template.toml
```

```
1 |   sandbox_image =
2 |   "registry.aliyuncs.com/google_containers/pause:3.1"
3 |   ...
4 |   ...
5 |
6 |   [plugins."io.containerd.grpc.v1.cri".registry.mirrors."docker.io"]
7 |     endpoint = [
8 |       "https://dr6tjot4.mirror.aliyuncs.com",
9 |       "https://registry-1.docker.io",
10 |    ]
```

拉取镜像:

脚本:

pull-images.sh

```
1 | #!/bin/bash
2 |
3 | folder=${1%.*}
4 |
5 | if [ x"${folder}" = x ]; then
6 |   echo -e "\033[31m 请指定 *-images.txt 文件 \033[0m"
7 |   exit
8 | fi
9 |
```

```

10 echo ""
11 echo ""
12
13 while read line
14 do
15     let count++
16     line=$(echo $line)
17     if [ x${line} = x ]; then
18         echo -e "\033[33m第 ${count} 行为空\033[0m"
19         echo
20         continue
21     fi
22     echo ">>>>> 下载第 ${count} 个镜像 ${line} >>>>>"
23     microk8s.ctr --namespace k8s.io image pull $line
24     echo ">>>>> 完成第 ${count} 个镜像 ${line}的下载 >>>>>"
25     echo ""
26 done < ${1}
27

```

镜像:

images.txt

```

1  docker.io/nfvpe/multus:v3.4.2
2  docker.io/metallb/speaker:v0.9.3
3  docker.io/metallb/controller:v0.9.3
4  docker.io/kubernetesui/dashboard:v2.0.0
5  docker.io/kubernetesui/metrics-scraper:v1.0.4
6  docker.io/traefik:2.3
7  docker.io/alpine:3.6
8  docker.io/cdkbot/hostpath-provisioner-amd64:1.0.0
9  docker.io/cdkbot/registry-amd64:2.6
10 docker.io/coredns/coredns:1.8.0
11 docker.io/jaegertracing/jaeger-operator:1.21.3
12 docker.io/grafana/grafana:6.4.3
13 docker.io/nvidia/k8s-device-plugin:1.11
14 docker.io/busybox:1.28.4
15 docker.io/nginx:latest
16 docker.io/cdkbot/microbot-amd64
17 docker.io/buoyantio/emojivoto-emoji-svc:v8
18 docker.io/buoyantio/emojivoto-voting-svc:v8
19 docker.io/buoyantio/emojivoto-web:v8
20 docker.io/busybox
21 docker.io/calico/cni:v3.13.2
22 docker.io/calico/pod2daemon-flexvol:v3.13.2
23 docker.io/calico/node:v3.13.2
24 docker.io/calico/kube-controllers:v3.13.2
25 docker.io/istio/examples-bookinfo-details-v1:1.8.0
26 docker.io/istio/examples-bookinfo-ratings-v1:1.8.0
27 docker.io/istio/examples-bookinfo-reviews-v1:1.8.0

```

```

28 docker.io/istio/examples-bookinfo-reviews-v2:1.8.0
29 docker.io/istio/examples-bookinfo-reviews-v3:1.8.0
30 docker.io/istio/examples-bookinfo-productpage-v1:1.8.0
31 docker.elastic.co/kibana/kibana-oss:7.4.2
32 quay.io/coreos/prometheus-operator:v0.34.0
33 quay.io/coreos/k8s-prometheus-adapter-amd64:v0.5.0
34 quay.io/coreos/kube-rbac-proxy:v0.4.1
35 quay.io/coreos/kube-state-metrics:v1.8.0
36 quay.io/coreos/kube-rbac-proxy:v0.4.1
37 quay.io/fluentd_elasticsearch/fluentd:v3.1.0
38 quay.io/fluentd_elasticsearch/elasticsearch:v7.4.3
39 quay.io/prometheus/alertmanager
40 quay.io/prometheus/prometheus
41 quay.io/prometheus/node-exporter:v0.18.1
42 registry.aliyuncs.com/google_containers/metrics-server-
  amd64:v0.3.6
43 registry.aliyuncs.com/google_containers/k8s-dns-kube-dns-
  amd64:1.14.7
44 registry.aliyuncs.com/google_containers/k8s-dns-dnsmasq-nanny-
  amd64:1.14.7
45 registry.aliyuncs.com/google_containers/k8s-dns-sidecar-
  amd64:1.14.7
46 registry.aliyuncs.com/google_containers/ingress-
  nginx/controller:v0.47.0

```

执行脚本：

```
1 | ./pull-images.sh images.txt
```

```

1 | microk8s.ctr --namespace k8s.io image tag
  registry.aliyuncs.com/google_containers/metrics-server-amd64:v0.3.6
  k8s.gcr.io/metrics-server-amd64:v0.3.6
2 | microk8s.ctr --namespace k8s.io image tag
  registry.aliyuncs.com/google_containers/k8s-dns-kube-dns-
  amd64:1.14.7 gcr.io/google_containers/k8s-dns-kube-dns-amd64:1.14.7
3 | microk8s.ctr --namespace k8s.io image tag
  registry.aliyuncs.com/google_containers/k8s-dns-dnsmasq-nanny-
  amd64:1.14.7 gcr.io/google_containers/k8s-dns-dnsmasq-nanny-
  amd64:1.14.7
4 | microk8s.ctr --namespace k8s.io image tag
  registry.aliyuncs.com/google_containers/k8s-dns-sidecar-
  amd64:1.14.7 gcr.io/google_containers/k8s-dns-sidecar-amd64:1.14.7
5 | microk8s.ctr --namespace k8s.io image tag
  registry.aliyuncs.com/google_containers/ingress-
  nginx/controller:v0.47.0 k8s.gcr.io/ingress-
  nginx/controller:v0.47.0

```

完成

等待k8s 初始化完成

```

1  $ microk8s status --wait-ready
2  microk8s is running
3  high-availability: no
4    datastore master nodes: 127.0.0.1:19001
5    datastore standby nodes: none
6  addons:
7    enabled:
8      ha-cluster          # Configure high availability on the
current node
9    disabled:
10   ambassador           # Ambassador API Gateway and Ingress
11   cilium                 # SDN, fast with full network policy
12   dashboard             # The Kubernetes dashboard
13   dns                   # CoreDNS
14   fluentd               # Elasticsearch-Fluentd-Kibana logging
and monitoring
15   gpu                   # Automatic enablement of Nvidia CUDA
16   helm                  # Helm 2 - the package manager for
Kubernetes
17   helm3                 # Helm 3 - Kubernetes package manager
18   host-access          # Allow Pods connecting to Host services
smoothly
19   ingress               # Ingress controller for external access
20   istio                 # Core Istio service mesh services
21   jaeger                # Kubernetes Jaeger operator with its
simple config
22   keda                  # Kubernetes-based Event Driven
Autoscaling
23   knative              # The Knative framework on Kubernetes.
24   kubeflow             # Kubeflow for easy ML deployments
25   linkerd              # Linkerd is a service mesh for
Kubernetes and other frameworks
26   metallb              # Loadbalancer for your Kubernetes
cluster
27   metrics-server       # K8s Metrics Server for API access to
service metrics
28   multus                # Multus CNI enables attaching multiple
network interfaces to pods
29   openebs              # OpenEBS is the open-source storage
solution for Kubernetes
30   openfaas             # openfaas serverless framework
31   portainer            # Portainer UI for your Kubernetes
cluster
32   prometheus           # Prometheus operator for monitoring and
logging
33   rbac                 # Role-Based Access Control for
authorisation

```

```
34 registry # Private image registry exposed on
localhost:32000
35 storage # Storage class; allocates storage from
host directory
36 traefik # traefik Ingress controller for external
access
37
```

访问 k8s

```
1 $ microk8s kubectl get nodes
2 NAME STATUS ROLES AGE VERSION
3 cloud-n1 Ready <none> 21h v1.21.1-3+ba118484dd39df
```

```
1 alias kubectl='microk8s kubectl'
```