

Day9 容器进阶之Kubernetes 网络管理

原理分析

1 打卡任务

作业:

1、创建1个Service和1个Pod作为其后端。通过kubectl describe获得该Service和对应Endpoints信息。

Service的名称为<cce21days-app5-svc-你的华为云id>

Pod的名称为<cce21days-app5-pod-你的华为云id>

打卡:

将所用命令、Service和Endpoints完整yaml截图上传

2 准备工作

- 1、私有镜像仓库中已存在入门课程中的坦克大战镜像或使用官方dockerhub镜像
- 2、已拥有可运行的CCE集群

3 创建 1 个 Service 和 1 个 Pod 作为其后端。通过 kubectl describe 获得该 Service 和对应 Endpoints 信息

- 1、登录day4已配置kubectl命令行的node节点
- 2、Pod yaml文件如下所示(day9-pod.yaml):

```
apiVersion: v1
kind: Pod
metadata:
  name: cce21days-app5-pod-huaweicloud
```

```
labels:
  app: cce21days-app5-pod-huaweicloud
spec:
  # 此处亲和性设置是为了将pod调度到有EIP的节点，便于下载外网镜像
  affinity:
    nodeAffinity:
      requiredDuringSchedulingIgnoredDuringExecution:
        nodeSelectorTerms:
          - matchExpressions:
              - key: kubernetes.io/hostname
                operator: In
                values:
                  - 192.168.1.219
    containers:
      - image: nginx:latest
        imagePullPolicy: IfNotPresent
        name: container-0
        restartPolicy: Always
        schedulerName: default-scheduler
```

Service的yaml文件如下(day9-service.yaml):

```
apiVersion: v1
kind: Service
metadata:
  labels:
    app: cce21days-app5-svc-huaweicloud
    name: cce21days-app5-svc-huaweicloud
spec:
  ports:
```

```
- name: service0

port: 80

protocol: TCP

targetPort: 80

selector:          # 选中对应的pod

app: cce21days-app5-pod-huaweicloud

type: NodePort
```

3、创建命令如下：

```
kubectl create -f day9-pod.yaml
```

```
kubectl create -f day9-service.yaml
```

4、查看pod状态：

```
kubectl get pods
```

```
kubectl get service
```

```
[root@cce-21days-cluster-51437 ~]# kubectl get pods
NAME                                READY   STATUS    RESTARTS   AGE
cce21days-app5-pod-huaweicloud     1/1     Running   0           9m
[root@cce-21days-cluster-51437 ~]# kubectl get service
NAME                                TYPE               CLUSTER-IP      EXTERNAL-IP  PORT(S)          AGE
cce21days-app5-svc-huaweicloud     NodePort           10.247.145.58   <none>       80:32704/TCP     8m
kubernetes                           ClusterIP           10.247.0.1      <none>       443/TCP          3d
[root@cce-21days-cluster-51437 ~]#
```

5、通过kubectl describe获得该Service和对应Endpoints信息：

```
kubectl describe svc cce21days-app5-svc-huaweicloud
```

```
kubectl describe endpoints cce21days-app5-svc-huaweicloud
```

```
[root@cce-21days-cluster-51437 ~]# kubectl describe svc cce21days-app5-svc-huaweicloud
Name: cce21days-app5-svc-huaweicloud
Namespace: default
Labels: app=cce21days-app5-svc-huaweicloud
Annotations: <none>
Selector: app=cce21days-app5-pod-huaweicloud
Type: NodePort
IP: 10.247.145.58
Port: service0 80/TCP
TargetPort: 80/TCP
NodePort: service0 32704/TCP
Endpoints: 172.16.0.37:80
Session Affinity: None
External Traffic Policy: Cluster
Events: <none>
[root@cce-21days-cluster-51437 ~]# kubectl describe endpoints cce21days-app5-svc-huaweicloud
Name: cce21days-app5-svc-huaweicloud
Namespace: default
Labels: app=cce21days-app5-svc-huaweicloud
Annotations: <none>
Subsets:
  Addresses: 172.16.0.37
  NotReadyAddresses: <none>
  Ports:
    Name Port Protocol
    ----
    service0 80 TCP
Events: <none>
[root@cce-21days-cluster-51437 ~]#
```

4 打卡截图

```
[root@cce-21days-cluster-51437 ~]# kubectl describe svc cce21days-app5-svc-huaweicloud
Name: cce21days-app5-svc-huaweicloud
Namespace: default
Labels: app=cce21days-app5-svc-huaweicloud
Annotations: <none>
Selector: app=cce21days-app5-pod-huaweicloud
Type: NodePort
IP: 10.247.145.58
Port: service0 80/TCP
TargetPort: 80/TCP
NodePort: service0 32704/TCP
Endpoints: 172.16.0.37:80
Session Affinity: None
External Traffic Policy: Cluster
Events: <none>
[root@cce-21days-cluster-51437 ~]# kubectl describe endpoints cce21days-app5-svc-huaweicloud
Name: cce21days-app5-svc-huaweicloud
Namespace: default
Labels: app=cce21days-app5-svc-huaweicloud
Annotations: <none>
Subsets:
  Addresses: 172.16.0.37
  NotReadyAddresses: <none>
  Ports:
    Name Port Protocol
    ----
    service0 80 TCP
Events: <none>
[root@cce-21days-cluster-51437 ~]#
```