k8s 安装 rabbitmq

rabbitmq-cluster-operator 方式安装

文档: https://github.com/rabbitmq/cluster-operator

StatefulSet 方式安装

```
mkdir -p /root/install-some-apps/ && cd /root/install-some-apps
mkdir rabbitmq-cluster
cd rabbitmq-cluster
```

使用参考：https://www.cnblogs.com/dukuan/p/9897443.html

```
# Pull image
docker pull rabbitmq:3.8.3-management

docker save rabbitmq:3.8.3-management -o /tmp/
scp -r /tmp/rabbit.tar root@10.4.7.108:/tmp/
scp -r /tmp/rabbit.tar k8s-node01:/tmp/
# login k8s-node01
docker load -i /tmp/rabbit.tar
```

下面是分布，自己手动创建

configmap

```
vim rabbitmq-configmap.yaml
```

```
kind: ConfigMap
apiVersion: v1
metadata:
  name: rmq-cluster-config
  namespace: public-service
  labels:
    addonmanager.kubernetes.io/mode: Reconcile
data:
    enabled_plugins: |
      [rabbitmq_management,rabbitmq_peer_discovery_k8s].
    rabbitmq.conf: |
      loopback_users.guest = false
```

```
      username: RABBITMQ_USER
      password: RABBITMQ_PASS
      ## Clustering
      cluster_formation.peer_discovery_backend = rabbit_peer_discovery_k8s
      cluster_formation.k8s.host = kubernetes.default.svc.cluster.local
      cluster_formation.k8s.address_type = hostname
      ##############################################
      # public-service is rabbitmq-cluster's namespace#
      ##############################################
      cluster_formation.k8s.hostname_suffix = .rmq-cluster.public-
service.svc.cluster.local
      cluster_formation.node_cleanup.interval = 10
      cluster_formation.node_cleanup.only_log_warning = true
      cluster_partition_handling = autoheal
      ## queue master locator
      queue_master_locator=min-masters
```

```
kubectl create ns public-service
kubectl create configmap rabbitmq-configmap.yaml
```

secret

```
vim rabbitmq-secret.yaml
```

```


kind: Secret
apiVersion: v1
metadata:
  name: rmq-cluster-secret
  namespace: public-service
stringData:
  cookie: ERLANG_COOKIE
  password: RABBITMQ_PASS
  url: amqp://RABBITMQ_USER:RABBITMQ_PASS@rmq-cluster-balancer
  username: RABBITMQ_USER
type: Opaque
```

```
kubectl create -f rabbitmq-secret.yaml
```

service

```
vim rabbitmq-svc.yaml
```

```
kind: Service
apiVersion: v1
metadata:
  labels:
    app: rmq-cluster
  name: rmq-cluster
  namespace: public-service
spec:
  clusterIP: None
  ports:
  - name: amqp
    port: 5672
    targetPort: 5672
  selector:
    app: rmq-cluster
---
kind: Service
apiVersion: v1
metadata:
  labels:
    app: rmq-cluster
    type: LoadBalancer
  name: rmq-cluster-balancer
  namespace: public-service
spec:
  ports:
  - name: http
    port: 15672
    protocol: TCP
    targetPort: 15672
  - name: amqp
    port: 5672
    protocol: TCP
    targetPort: 5672
  selector:
    app: rmq-cluster
  type: NodePort
```

```
kubectl create -f rabbitmq-svc.yaml
```

rbac

```
vim rabbitmq-rbac.yaml
```

```
apiVersion: v1
kind: ServiceAccount
metadata:
  name: rmq-cluster
  namespace: public-service
---
kind: Role
apiVersion: rbac.authorization.k8s.io/v1beta1
metadata:
  name: rmq-cluster
  namespace: public-service
rules:
  - apiGroups:
      - ""
    resources:
      - endpoints
    verbs:
      - get
---
kind: RoleBinding
apiVersion: rbac.authorization.k8s.io/v1beta1
metadata:
  name: rmq-cluster
  namespace: public-service
roleRef:
  apiGroup: rbac.authorization.k8s.io
  kind: Role
  name: rmq-cluster
subjects:
- kind: ServiceAccount
  name: rmq-cluster
  namespace: public-service
```

```
kubect create -f rabbitmq-rbac.yaml
```

sts

```
vim rabbitmq-sts.yaml
```

```
kind: StatefulSet
```

```yaml
apiVersion: apps/v1
metadata:
  labels:
    app: rmq-cluster
  name: rmq-cluster
  namespace: public-service
spec:
  replicas: 3
  selector:
    matchLabels:
      app: rmq-cluster
  serviceName: rmq-cluster
  template:
    metadata:
      labels:
        app: rmq-cluster
    spec:
      containers:
      - args:
        - -c
        - cp -v /etc/rabbitmq/rabbitmq.conf ${RABBITMQ_CONFIG_FILE}; exec docker-
entrypoint.sh
          rabbitmq-server
        command:
        - sh
        env:
        - name: RABBITMQ_DEFAULT_USER
          valueFrom:
            secretKeyRef:
              key: username
              name: rmq-cluster-secret
        - name: RABBITMQ_DEFAULT_PASS
          valueFrom:
            secretKeyRef:
              key: password
              name: rmq-cluster-secret
        - name: RABBITMQ_ERLANG_COOKIE
          valueFrom:
            secretKeyRef:
              key: cookie
              name: rmq-cluster-secret
        - name: K8S_SERVICE_NAME
          value: rmq-cluster
        - name: POD_IP
          valueFrom:
            fieldRef:
              fieldPath: status.podIP
        - name: POD_NAME
          valueFrom:
```

```
          fieldRef:
            fieldPath: metadata.name
      - name: POD_NAMESPACE
        valueFrom:
          fieldRef:
            fieldPath: metadata.namespace
      - name: RABBITMQ_USE_LONGNAME
        value: "true"
      - name: RABBITMQ_NODENAME
        value: rabbit@$(POD_NAME).rmq-cluster.$(POD_NAMESPACE).svc.cluster.local
      - name: RABBITMQ_CONFIG_FILE
        value: /var/lib/rabbitmq/rabbitmq.conf
      image: rabbitmq:3.8.3-management
      imagePullPolicy: IfNotPresent
      livenessProbe:
        exec:
          command:
          - rabbitmqctl
          - status
        initialDelaySeconds: 30
        timeoutSeconds: 10
      name: rabbitmq
      ports:
      - containerPort: 15672
        name: http
        protocol: TCP
      - containerPort: 5672
        name: amqp
        protocol: TCP
      readinessProbe:
        exec:
          command:
          - rabbitmqctl
          - status
        initialDelaySeconds: 10
        timeoutSeconds: 10
      volumeMounts:
      - mountPath: /etc/rabbitmq
        name: config-volume
        readOnly: false
      - mountPath: /var/lib/rabbitmq
        name: rabbitmq-storage
        readOnly: false
    serviceAccountName: rmq-cluster
    terminationGracePeriodSeconds: 30
    volumes:
    - configMap:
        items:
        - key: rabbitmq.conf
```

```
            path: rabbitmq.conf
          - key: enabled_plugins
            path: enabled_plugins
          name: rmq-cluster-config
        name: config-volume
      - name: rabbitmq-storage
        emptyDir: {}
```

```
kubectl create rabbitmq-sts.yaml
```

查看

```
kubectl get po -n public-service

# entry
kubectl exec -it rmq-cluster-0 -n public-service -- bash
more /var/lib/rabbitmq/rabbitmq.conf


kubectl get ep -n !$

# login rabbitmq web
http://10.4.7.107:31497

username: RABBITMQ_USER
password: RABBITMQ_PASS
```

扩容、缩容

```
kubectl get sts -n public-service

# 扩容
kubectl scale sts rmq-cluster --replicas=4 -n public-service

kubeclt get po -n !$

# 缩容
kubectl scale sts rmq-cluster --replicas=3 -n public-service
```