



链滴

K8S 之 configmap 的理解

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原文链接: <https://ld246.com/article/1545709131869>

来源网站: 链滴

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创建configmap 的另一种方法 (通过文件)

<https://www.cnblogs.com/zhenyuyaodidiao/p/6594410.html>

[configmap 中文指引](#)

configmap 的组成要素: name、key&value

configmap 到pod的使用方式: 通过变量、volume的映射

1. 何为细粒度:

configmap yaml文件内格式:

```
data:
  special.passwd: yaodidiao
  special.user: zhenyuyaodidiao ##
```

yaml中卷挂载内容:

```
spec:
  containers:
    - name: testvolume
      image: busybox
      imagePullPolicy: IfNotPresent
      volumeMounts:
        - name: config-volume
          mountPath: /etc/config
      command:
        - sleep
        - "360000"
  volumes:
    - name: config-volume
      configMap:
        name: game-config-4
```

挂载到pod后文件目录格式:

```
# cd /etc/config/
/etc/config # ls
special.passwd special.user
/etc/config # cat special.user
zhenyuyaodidiao/etc/config # ## configmap 的key 为文件名字, 变量值为文件内容
```

2. 何为粗粒度:

configmap yaml文件内格式:

```
data:
  game.properties: |
    enemies=aliens
    lives=3
```

```
enemies.cheat=true
enemies.cheat.level=noGoodRotten
secret.code.passphrase=UUDDLRLRBABAS
secret.code.allowed=true
secret.code.lives=30
ui.properties: |
color.good=purple
color.bad=yellow
allow.textmode=true
how.nice.to.look=fairlyNice
```

yaml 中卷挂载内容

```
spec:
  containers:
    - name: testvolume
      image: busybox
      imagePullPolicy: IfNotPresent
      volumeMounts:
        - name: config-volume
          mountPath: /etc/config
      command:
        - sleep
        - "360000"
  volumes:
    - name: config-volume
      configMap:
        name: game-config
```

通过卷挂载后相应文件结构及内容

```
# cd /etc/config/
/etc/config # ls
game.properties ui.properties
/etc/config # cat game.properties ## 其键值对即为文件的值
enemies=aliens
lives=3
enemies.cheat=true
enemies.cheat.level=noGoodRotten
secret.code.passphrase=UUDDLRLRBABAS
secret.code.allowed=true
secret.code.lives=30
/etc/config # cat ui.properties
color.good=purple
color.bad=yellow
allow.textmode=true
how.nice.to.look=fairlyNice
/etc/config #
```

configmap中data下键的内涵

1. (暂时) : data下的键均对应的是文件名, 其下的值为文件内容

configmap内容

```
[root@k8s-master propertirs]# kubectl create configmap game-config-4 --from-literal=special.user=zhenyu --from-literal=special.passwd=yaodidiao
configmap "game-config-4" created
[root@k8s-master propertirs]# kubectl get configmaps game-config-4 -o yaml
apiVersion: v1
data:
  special.passwd: yaodidiao
  special.user: zhenyu
kind: ConfigMap
metadata:
  creationTimestamp: 2017-03-21T03:36:12Z
  name: game-config-4
  namespace: default
  resourceVersion: "3003915"
  selfLink: /api/v1/namespaces/default/configmaps/game-config-4
  uid: 8802f6d2-0de7-11e7-b3d5-fa163ebba51b
```

configmap env使用示例:

```
[root@k8s-master propertirs]# kubectl get configmaps game-config-4 -o yaml
apiVersion: v1
data:
  special.passwd: yaodidiao
  special.user: zhenyu
kind: ConfigMap
metadata:
  creationTimestamp: 2017-03-21T03:36:12Z
  name: game-config-4
  namespace: default
  resourceVersion: "3003915"
  selfLink: /api/v1/namespaces/default/configmaps/game-config-4
  uid: 8802f6d2-0de7-11e7-b3d5-fa163ebba51b
[root@k8s-master propertirs]# cat testEnv.yaml
apiVersion: v1
kind: Pod
metadata:
  labels:
    name: testenv
    role: master
  name: testenv
spec:
  containers:
  - name: testenv
    image: busybox
    imagePullPolicy: IfNotPresent
    env:
    - name: SPECIAL_USER   ### it's here
      valueFrom:
        configMapKeyRef:
          name: game-config-4
          key: special.user
    command:
    - sleep
    - "360000"
```

```
[root@k8s-master propertirs]# kubectl create -f testEnv.yaml
pod "testenv" created
[root@k8s-master propertirs]# kubectl exec -ti testenv sh
/ # echo $SPECIAL_USER
zhenyu
/ #
```

configmap挂载卷的

```
[root@k8s-master propertirs]# kubectl get configmaps game-config -o yaml
apiVersion: v1
data:
  game.properties: |
    enemies=aliens
    lives=3
    enemies.cheat=true
    enemies.cheat.level=noGoodRotten
    secret.code.passphrase=UUDDLRLRBABAS
    secret.code.allowed=true
    secret.code.lives=30
  ui.properties: |
    color.good=purple
    color.bad=yellow
    allow.textmode=true
    how.nice.to.look=fairlyNice
kind: ConfigMap
metadata:
  creationTimestamp: 2017-03-21T03:22:34Z
  name: game-config
  namespace: default
  resourceVersion: "3002770"
  selfLink: /api/v1/namespaces/default/configmaps/game-config
  uid: a04f90f0-0de5-11e7-b3d5-fa163ebba51b
[root@k8s-master propertirs]# cat testVolume.yaml
apiVersion: v1
kind: Pod
metadata:
  labels:
    name: testvolume
    role: master
  name: testvolume
spec:
  containers:
  - name: testvolume
    image: busybox
    imagePullPolicy: IfNotPresent
    volumeMounts:
    - name: config-volume
      mountPath: /etc/config
    command:
    - sleep
    - "360000"
  volumes:
  - name: config-volume
```

```
    configMap:
      name: game-config
[root@k8s-master propertirs]# kubectl create -f testVolume.yaml
pod "testvolume" created
[root@k8s-master propertirs]# kubectl exec -ti testvolume sh
/ # cd /etc/config/
/etc/config # ls
game.properties ui.properties
/etc/config # cat game.properties
enemies=aliens
lives=3
enemies.cheat=true
enemies.cheat.level=noGoodRotten
secret.code.passphrase=UUDDLRLRBABAS
secret.code.allowed=true
secret.code.lives=30
/etc/config # cat ui.properties
color.good=purple
color.bad=yellow
allow.textmode=true
how.nice.to.look=fairlyNice
/etc/config #
```

configmap 使用示例

A:Configmap 代替环境变量

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: special-config
  namespace: default
data:
  special.how: very
  special.type: charm
```

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: env-config
  namespace: default
data:
  log_level: INFO
```

pod中如何使用

- 用于pod中的变量

```
apiVersion: v1
kind: Pod
metadata:
  name: dapi-test-pod
```

```
spec:
  containers:
  - name: test-container
    image: gcr.io/google_containers/busybox
    command: [ "/bin/sh", "-c", "env" ]
    env:
    - name: SPECIAL_LEVEL_KEY #环境变量名
      valueFrom: #值得来源
        configMapKeyRef: # 定义从configmap中获取
          name: special-config # configmap中对应的configmap名字
          key: special.how # configmap中的key的值
    - name: SPECIAL_TYPE_KEY
      valueFrom:
        configMapKeyRef:
          name: special-config
          key: special.type
    envFrom:
    - configMapRef:
        name: env-config
  restartPolicy: Never
```