Managing Application Configuration

Relevant Documentation

- ConfigMaps
- Secrets

Lesson Reference

Create a ConfigMap.

```
vi my-configmap.yml
```

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: my-configmap
data:
  key1: Hello, world!
  key2: |
    Test
    multiple lines
    more lines
```

```
kubectl create -f my-configmap.yml
```

View your ConfigMap data.

```
kubectl describe configmap my-configmap
```

Create a secret.

Get two base64-encoded values.

```
echo -n 'secret' | base64

echo -n 'anothersecret' | base64
```

```
vi my-secret.yml
```

Include your two base64-encoded values in the file.

```
apiVersion: v1
kind: Secret
metadata:
  name: my-secret
type: Opaque
data:
  secretkey1: <base64 String 1>
  secretkey2: <base64 String 2>
```

```
kubectl create -f my-secret.yml
```

Create a pod and supply configuration data using environment variables.

```
vi env-pod.yml
```

```
apiVersion: v1
kind: Pod
metadata:
  name: env-pod
spec:
  containers:
  - name: busybox
    image: busybox
    command: ['sh', '-c', 'echo "configmap: $CONFIGMAPVAR secret: $SECRETVAR"']
    env:
    - name: CONFIGMAPVAR
      valueFrom:
        configMapKeyRef:
          name: my-configmap
          key: key1
    - name: SECRETVAR
      valueFrom:
        secretKeyRef:
          name: my-secret
          key: secretkey1
```

```
kubectl create -f env-pod.yml
```

Check the log for the pod to see your configuration values!

```
kubectl logs env-pod
```

Create a pod and supply configuration data using volumes.

```
vi volume-pod.yml
```

```
apiVersion: v1
kind: Pod
metadata:
  name: volume-pod
spec:
  containers:
  - name: busybox
    image: busybox
    command: ['sh', '-c', 'while true; do sleep 3600; done']
    volumeMounts:
    - name: configmap-volume
      mountPath: /etc/config/configmap
    - name: secret-volume
      mountPath: /etc/config/secret
  volumes:
  - name: configmap-volume
    configMap:
```

```
      name: my-configmap
  - name: secret-volume
    secret:
      secretName: my-secret
```

```
kubectl create -f volume-pod.yml
```

Use `kubectl exec` to navigate inside the pod and see your mounted config data files.

```
kubectl exec volume-pod -- ls /etc/config/configmap

kubectl exec volume-pod -- cat /etc/config/configmap/key1

kubectl exec volume-pod -- cat /etc/config/configmap/key2

kubectl exec volume-pod -- ls /etc/config/secret

kubectl exec volume-pod -- cat /etc/config/secret/secretkey1

kubectl exec volume-pod -- cat /etc/config/secret/secretkey2
```