

## Lab 8: Secrets

### Steps:

1. Create a secret as **app-db-secret** with the values **username=admin** and **password=P@ssw0rd123**.

```
Shell
```

```
kubectl create secret generic app-db-secret \  
--from-literal=username=admin \  
--from-literal=password=P@ssw0rd123
```

OR

```
Shell
```

```
echo -n 'admin' | base64  
# Output: YWRtaW4=  
echo -n 'P@ssw0rd123' | base64  
# Output: UEBzc3cwcmQxMjM=
```

```
Shell
```

```
apiVersion: v1  
kind: Secret  
metadata:  
  name: app-db-secret  
type: Opaque  
data:  
  username: YWRtaW4=  
  password: UEBzc3cwcmQxMjM=
```

```
Shell
```

```
k apply -f secret.yaml
```

2. Create a pod **secret-env-pod** and inject the secret via Environment Variables. Check the ENV value.

```
Shell
apiVersion: v1
kind: Pod
metadata:
  name: secret-env-pod
spec:
  containers:
  - name: busybox
    image: busybox
    command: ["sh", "-c", "echo 'Password is set' && sleep 3600"]
    env:
      - name: DB_PASSWORD
        valueFrom:
          secretKeyRef:
            name: app-db-secret
            key: password
```

```
Shell
k apply -f secret-env-pod.yaml
```

```
Shell
kubectl exec secret-env-pod -- sh -c 'echo $DB_PASSWORD'
P@ssw0rd123
```

3. Create a pod as **secret-vol-pod** and mount secret as a volume into **/etc/db-creds**. Check the password value inside the pod.

```
Shell
apiVersion: v1
kind: Pod
metadata:
  name: secret-vol-pod
spec:
  volumes:
  - name: secret-vol
```

```
secret:
  secretName: app-db-secret
containers:
- name: busybox
  image: busybox
  command: ["sh", "-c", "sleep 3600"]
  volumeMounts:
    - name: secret-vol
      mountPath: "/etc/db-creds"
      readOnly: true
```

Shell

```
kubectl apply -f secret-vol-pod.yaml
```

Shell

```
kubectl exec secret-vol-pod -- ls /etc/db-creds
password
username
```

Shell

```
kubectl exec secret-vol-pod -- cat /etc/db-creds/password
P@ssw0rd123
```

Shell

```
kubectl patch secret app-db-secret -p '
data:
password: UEBzc3cwcmQxMjNrOHM=
username: YWRtaW4=
'
```

Shell

```
kubectl exec secret-env-pod -- sh -c 'echo $DB_PASSWORD'  
kubectl exec secret-vol-pod -- cat /etc/db-creds/password
```