

Injecting ConfigMaps & Secrets via Environment Variables

Step 1: Create a Namespace

Step 2: Create a Secret

```
controlplane ~ → kubectl create namespace config-secret-demo
namespace/config-secret-demo created
```

```
controlplane ~ → kubectl get ns config-secret-demo
NAME                STATUS    AGE
config-secret-demo  Active   15s
```

```
controlplane ~ → kubectl create secret generic db-user-pass \
  --from-literal=username=myappuser \
  --from-literal=password='S3cr3tP@ssw0rd' \
  -n config-secret-demo
secret/db-user-pass created
```

```
controlplane ~ → kubectl get secret db-user-pass -n config-secret-demo
kubectl describe secret db-user-pass -n config-secret-demo
NAME                TYPE      DATA  AGE
db-user-pass        Opaque    2       12s
Name:               db-user-pass
Namespace:          config-secret-demo
Labels:             <none>
Annotations:        <none>

Type: Opaque

Data
====
password: 14 bytes
username: 9 bytes
```

Step 3: Create a ConfigMap

```
apiVersion: v1
containers:
- name: demo-container
  image: busybox
  command: ["sh", "-c", "env; sleep 3600"]
  env:
  - name: APP_MODE
    valueFrom:
      configMapKeyRef:
        name: app-config
        key: APP_MODE
  - name: LOG_LEVEL
    valueFrom:
      configMapKeyRef:
        name: app-config
        key: LOG_LEVEL
  - name: DB_USERNAME
    valueFrom:
      secretKeyRef:
        name: db-user-pass
        key: username
  - name: DB_PASSWORD
    valueFrom:
      secretKeyRef:
        name: db-user-pass
        key: password
```

```
controlplane ~ ❌ vi env-demo-pod.yaml
```

```
controlplane ~ ➔ kubectl apply -f env-demo-pod.yaml
pod/env-demo created
```

Step 5: Verify the Pod and Environment Variables

```
controlplane ~ → kubectl get pods -n config-secret-demo
NAME          READY   STATUS    RESTARTS   AGE
env-demo      1/1     Running   0           52s

controlplane ~ → kubectl logs env-demo -n config-secret-demo
# or to exec into the pod:
kubectl exec -it env-demo -n config-secret-demo -- sh
# then run inside:
env
KUBERNETES_SERVICE_PORT=443
KUBERNETES_PORT=tcp://172.20.0.1:443
LOG_LEVEL=info
HOSTNAME=env-demo
SHLV=1
HOME=/root
DB_USERNAME=myappuser
APP_MODE=production
KUBERNETES_PORT_443_TCP_ADDR=172.20.0.1
PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin
KUBERNETES_PORT_443_TCP_PORT=443
KUBERNETES_PORT_443_TCP_PROTO=tcp
KUBERNETES_SERVICE_PORT_HTTPS=443
KUBERNETES_PORT_443_TCP=tcp://172.20.0.1:443
DB_PASSWORD=S3cr3tP@ssw0rd
KUBERNETES_SERVICE_HOST=172.20.0.1
PWD=/
/ #
```