

# ConfigMap

A ConfigMap is a Kubernetes object used to store non-sensitive configuration data in key-value pairs. Think of it like a config file (e.g., .env, config.json) — but managed inside your Kubernetes cluster.

## Why Use ConfigMap

- Decouple configuration from code.
- Change config without rebuilding container images.
- Reuse config across multiple pods or applications.
- Can be mounted as files or used as environment variables in Pods.

## Sample ConfigMap YAML

```
apiVersion: v1
kind: ConfigMap
metadata:
  name: my-config           # Name of the ConfigMap
  namespace: default        # Optional namespace
data:
  APP_NAME: "WeSim App"     # Key-value pair 1
  APP_ENV: "production"     # Key-value pair 2
  APP_PORT: "8080"          # Key-value pair 3
```

## How to Use ConfigMap in a Pod

As Environment Variables:

```
apiVersion: v1
kind: Pod
metadata:
  name: app-pod
spec:
  containers:
    - name: myapp
      image: nginx
      envFrom:
        - configMapRef:
            name: my-config # Reference the ConfigMap
```

Feature	ConfigMap	Secret
Purpose	Store non-sensitive data	Store sensitive data (e.g., password)
Encoded?	No	Yes (Base64-encoded)
Use in pods	Env var / volume	Same