

# Kubernetes Deployment - Web Application

```
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apiVersion: apps/v1
kind: Deployment
metadata:
  name: web-app
  namespace: production
  labels:
    app: web-app
    tier: frontend
spec:
  replicas: 3
  selector:
    matchLabels:
      app: web-app
  template:
    metadata:
      labels:
        app: web-app
        tier: frontend
    spec:
      containers:
        - name: web-app
          image: nginx:1.25.3
          ports:
            - containerPort: 80
          resources:
            requests:
              cpu: "100m"
              memory: "128Mi"
            limits:
              cpu: "500m"
              memory: "256Mi"
        livenessProbe:
          httpGet:
            path: /healthz
            port: 80
          initialDelaySeconds: 10
          periodSeconds: 30
        readinessProbe:
          httpGet:
            path: /ready
            port: 80
          initialDelaySeconds: 5
          periodSeconds: 10
---
apiVersion: v1
kind: Service
metadata:
  name: web-app-svc
  namespace: production
spec:
  type: ClusterIP
  selector:
    app: web-app
  ports:
    - port: 80
      targetPort: 80
      protocol: TCP
```