




# Create a Pod in Kubernetes

## Objective

- Understand the structure and syntax of a **Pod definition YAML**.
  - Learn to **create, inspect, and delete** a Pod in Kubernetes.
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## Prerequisites

-  A running Kubernetes cluster (Minikube, KIND, or cloud-based)
  -  `kubectl` installed and configured
  -  Basic YAML knowledge
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## Step 1: Create a YAML File

Create a file called `pod-example.yaml`:

```
apiVersion: v1
kind: Pod
metadata:
  name: my-pod
  labels:
    app: my-app
spec:
  containers:
    - name: my-container
      image: nginx:latest
```

## **YAML Breakdown:**

Key	Description
<code>apiVersion</code>	Kubernetes API version, e.g., <code>v1</code>
<code>kind</code>	Resource type, here it's <code>Pod</code>
<code>metadata</code>	Pod name and optional labels
<code>spec</code>	Specifications of the Pod including container details

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## **Step 2: Create the Pod**

Run the following command to create the Pod:

```
kubectl apply -f pod-example.yaml
```

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## **Step 3: Verify the Pod**

Check if your Pod is running:


```
kubectl get pods
```

For detailed info:

```
kubectl describe pod my-pod
```

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## **Step 4: Interact with the Pod**

 **View logs** of the container:

```
kubectl logs my-pod
```

 **Open a terminal inside the container:**

```
kubectl exec -it my-pod -- /bin/bash
```

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### **Step 5: Delete the Pod**

When you're done:

```
kubectl delete pod my-pod
```

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