Configure Taints and Tolerants

In Kubernetes, Ttaints and Tolerants work together to ensure that pods are not scheduled onto inappropriate nodes.

1. Adding a Taint to a Node

A Taint is applied to a node and prevents pods from being scheduled onto it unless those pods have a matching Toleration.

Syntax:

$ kubectl taint nodes <node-name> <key>=<value>:<effect>

Example:

$ kubectl taint nodes node1 key1=value1:NoSchedule

- This taint means: "Do not schedule pods onto `node1` unless they tolerate this taint."

2. Adding a Toleration to a Pod

A Toleration is added to a pod spec, allowing it to be scheduled onto nodes with matching taints.

Pod Spec:
YAML code

```
apiVersion: v1
kind: Pod
metadata:
  name: mypod
spec:
  tolerations:
  - key: "key1"
    operator: "Equal"
    value: "value1"
    effect: "NoSchedule"
```

```
  containers:
  - name: mycontainer
    image: nginx
```

- This pod can be scheduled onto nodes tainted with `key1=value1:NoSchedule`.

3. Remove a Taint from a Node

$ kubectl taint nodes <node-name> <key>:<effect>-

Example:

$ kubectl taint nodes node1 key1:NoSchedule-