kubernetes

Kubernetes: Labels

- ***Labels*** are key/value pairs that are attached to objects.
- Labels are intended to be used to specify identifying attributes of objects that are meaningful and relevant to users.
- Labels are like Tags in Cloud Providers like AWS , GCP.
- Labels can be attached to objects at creation time and subsequently added and modified at any time.
- For Labels you can follow Key-Value Pair Structure like.
  Key: environment - **Value**: dev/qa/UAT/prod
  Key: department - **Value**: engineering/cloudops/QA

- configuration file for a Pod that has two labels **environment: production** and **app: nginx** :

```
apiVersion: v1
kind: Pod
metadata:
  name: label-demo
  labels:
    environment: production
    app: nginx
spec:
  containers:
  - name: nginx
    image: nginx:1.7.9
    ports:
    - containerPort: 80
```

- Labels are not **Unique** and **multiple Labels** can be added to One Object.
- Once Labels are attached to **object**, we can filter the results on Labels.
- Above approach is Called **Label-Selector**.
- Using Label Selectors user can use matching expressions to match Labels.
- Sample Matching:
  environment = production
  tier != backend
  environment in (production, qa, UAT)
  tier notin (frontend, backend)

- User can use Labels to tag **Nodes**
- Once **Nodes** are tagged, user can use **label Selectors** to run Pods only on **matching Nodes**.
- Tag Node Like:

```
kubectl get nodes
kubectl label nodes <your-node-name> disktype=ssd
kubectl get nodes --show-labels
```

➤ Run Pods on Specific Nodes by **nodeSelector**.

```
apiVersion: v1
kind: Pod
metadata:
  name: nginx
  labels:
    env: test
spec:
  containers:
  - name: nginx
    image: nginx
    imagePullPolicy: IfNotPresent
  nodeSelector:
    disktype: ssd
```

Will see you in Next Lecture…

See you in next lecture …