





## Labels and Label Selectors



- Labels are key-value pairs attached to Kubernetes objects (e.g. Pods, ReplicaSets, Nodes, Namespaces, Persistent Volumes).
- Labels are used to organize and select a subset of objects, based on the requirements in place.
- Many objects can have the same Label(s). Labels do not provide uniqueness to objects.
- Controllers use Labels to logically group together decoupled objects, rather than using objects' names or IDs.

## Example labels:

- "environment": "dev", "environment": "qa", "environment": "production"
- "tier": "frontend", "tier": "backend", "tier": "cache"

```
Labels and Label Selectors
       Controllers use Label Selectors to select a subset of objects.
                                                       apiVersion: v1
        apiVersion: apps/v1
                                                       kind: Service
        kind: Deployment
        metadata:
                                                       metadata:
                                                         name: db-service
          name: db-deployment
        spec:
                                                         labels:
          replicas: 1
          selector:
                                                          app: todoapp
            matchLabels:
                                                         selector:
          template:
            metadata:
                                                         type: ClusterIP
               labels:
                                                         ports:
                 name: mongo
                                                          - name: db
                app: todoapp
                                                            port: 27017
            spec:
                                                            targetPort: 27017
              containers:
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```

