

Create pods helps of deploy through interactive mode

```
root@master01:~# kubectl get pod
Every 2.0s: kubectl get pod
NAME                                READY   STATUS    RESTARTS   AGE
test-785bcb56f5-4bfpr               1/1     Running   0           2m
test-785bcb56f5-7bdhs               1/1     Running   0           2m
test-785bcb56f5-8zftz               1/1     Running   0           2m
test-785bcb56f5-ckmkp               1/1     Running   0           2m
test-785bcb56f5-crfl6               1/1     Running   0           2m
test-785bcb56f5-fcrvm               1/1     Running   0           2m
test-785bcb56f5-fv5rw               1/1     Running   0           2m
test-785bcb56f5-rx6h6               1/1     Running   0           2m
test-785bcb56f5-spbh7               1/1     Running   0           2m
test-785bcb56f5-w6f42               1/1     Running   0           2m

root@master01:~#
root@master01:~# kubectl create deployment test --image=nginx:1.16 --replicas=10
deployment.apps/test created
root@master01:~#
```

vl: nginx:1.1

```
root@master01:~# kubectl rollout history deployment test
deployment.apps/test
REVISION  CHANGE-CAUSE
1          <none>

root@master01:~#
```

To rolling upgrade to new version through interactive mode

```
root@master01:~# kubectl set image deployment test nginx=nginx:1.17
deployment.apps/test image updated
root@master01:~#
```

```

root@master01:~#
root@master01:~# kubectl create deploy test --image=nginx --replicas=2
deployment.apps/test created
root@master01:~#
root@master01:~# kubectl get pod --show-labels
NAME                READY   STATUS             RESTARTS   AGE   LABELS
test-5746d4c59f-75582 0/1     ContainerCreating   0          9s    app=test,pod-template-hash=5746d4c59f
test-5746d4c59f-xxfgg 1/1     Running             0          9s    app=test,pod-template-hash=5746d4c59f
root@master01:~#
root@master01:~# kubectl get deploy
NAME    READY   UP-TO-DATE   AVAILABLE   AGE
test    2/2     2            2           62s
root@master01:~#
root@master01:~# kubectl get pod
NAME                READY   STATUS    RESTARTS   AGE
test-5746d4c59f-75582 1/1     Running   0          80s
test-5746d4c59f-xxfgg 1/1     Running   0          80s
root@master01:~#
root@master01:~# kubectl delete pod test-5746d4c59f-75582
pod "test-5746d4c59f-75582" deleted
root@master01:~#
root@master01:~# kubectl get pod
NAME                READY   STATUS             RESTARTS   AGE
test-5746d4c59f-k22p9 0/1     ContainerCreating   0          5s
test-5746d4c59f-xxfgg 1/1     Running             0          94s
root@master01:~#

```

```

root@master01:~# kubectl scale --replicas=4 deploy test
deployment.apps/test scaled
root@master01:~#
root@master01:~# kubectl get pod
NAME                READY   STATUS    RESTARTS   AGE
test-5746d4c59f-9wds4 1/1     Running   0          8s
test-5746d4c59f-k22p9 1/1     Running   0          45s
test-5746d4c59f-vbjnz 1/1     Running   0          7s
test-5746d4c59f-xxfgg 1/1     Running   0          2m14s
root@master01:~#

```

```

root@master01:~# kubectl rollout history deploy test
deployment.apps/test
REVISION  CHANGE-CAUSE
1         <none>
2         <none>

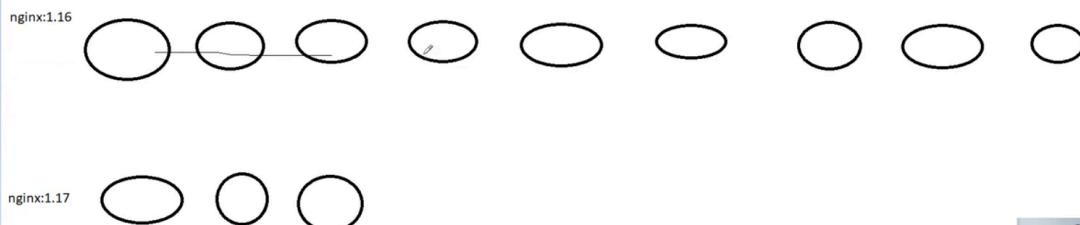
```

RollingupdateStrategy: 25%

```

root@master01:~#
root@master01:~# kubectl describe deploy test | grep -i max
RollingUpdateStrategy: 25% max unavailable, 25% max surge
root@master01:~#

```



History of rollout

```
root@master01:~# kubectl rollout history deploy test --revision=2
deployment.apps/test with revision #2
Pod Template:
  Labels:      app=test
              pod-template-hash=5dd5794b46
  Containers:
    nginx:
      Image:      nginx:1.17
      Port:       <none>
      Host Port:  <none>
      Environment: <none>
      Mounts:      <none>
      Volumes:     <none>
root@master01:~#
```

Directly rollout from etcd

```
Volumes:      <none>
```

```
root@master01:~# kubectl edit deploy test
```

Deployment strategy

Deployment Strategy:

- 1) RollingUpdateStrategy: we are saving down time . bcz upgrade happing partialy.
- 2) Recreate : it terminate old version and deploy new version pod

To change in manifest for Recreate strategy

```
st-7
st-7
st-7 lab
st-7
st-7
v1:spec:
  progressDeadlineSeconds: 600
  replicas: 10
  revisionHistoryLimit: 10
  selector:
    matchLabels:
      app: test
  strategy:
    type: Recreate
  template:
    metadata:
      creationTimestamp: null
      labels:
        app: test
    spec:
      containers:
        - image: nginx:1.16
          imagePullPolicy: IfNotPresent
```

```
root@master01:~# kubectl set image deploy test nginx=nginx:1.17
deployment.apps/test image updated
```

Type of Deployment mode

* type of deployment mode .

- 3) Canary Deployment
- 4) Blue-green Deployment

```
root@master01:~# kubectl get deployment test -o json
{"name": "test",
"namespace": "default",
"resourceVersion": "118113",
"uid": "97a54f3d-3122-44a9-a59b-c92d634d7ff9",
"spec": {
  "progressDeadlineSeconds": 600,
  "replicas": 10,
  "revisionHistoryLimit": 10,
  "selector": {
    "matchLabels": {
      "app": "test"
    }
  },
  "strategy": {
    "rollingUpdate": {
      "maxSurge": 25%,
      "maxUnavailable": 25%
    },
    "type": "RollingUpdate"
  },
  "template": {
    "metadata": {
      "creationTimestamp": null,
      "labels": {
        "app": "test"
      }
    },
    "spec": {
      "containers": {
        "name": "nginx",
        "image": "nginx:1.17",
        "ports": [
          {
            "containerPort": 80
          }
        ]
      }
    }
  }
},
"status": {
  "observedGeneration": 1,
  "replicas": 10,
  "updatedReplicas": 10,
  "availableReplicas": 10
}
}
```

lab-1: