Performing Rolling Updates

Relevant Documentation

- Updating a Deployment

Exam Tips

- A rolling update gradually rolls out changes to a Deployment's Pod template by gradually replacing replicas with new ones.
- Use `kubectl rollout status` to check the status of a rolling update.
- Roll back the latest rolling update with: `kubectl rollout undo`.

Lesson Reference

Log in to the **control plane node**.

Create a Deployment.

```
vi rolling-deployment.yml
```

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: rolling-deployment
spec:
  replicas: 5
  selector:
    matchLabels:
      app: rolling
  template:
    metadata:
      labels:
        app: rolling
    spec:
      containers:
      - name: nginx
        image: nginx:1.14.2
        ports:
        - containerPort: 80
```

```
kubectl apply -f rolling-deployment.yml
```

Check the Deployment status and wait for all of the replicas to fully start up.

```
kubectl get deployment rolling-deployment
```

Update the Deployment's image.

```
kubectl set image deployment.v1.apps/rolling-deployment nginx=nginx:1.16.1
```

View the list of Pods. The Deployment's Pods will be gradually replaced with new Pods running the new image version.

```
kubectl get pods
```

View the status of the rollout.

```
kubectl rollout status deployment/rolling-deployment
```

You can also perform a rolling update simply by editing the Deployment manifest.

```
kubectl edit deployment rolling-deployment
```

Change the container image.

```
containers:
- name: nginx
  image: nginx:1.20.1
```

Save the file to initiate the rolling update.

Check rollout status.

```
kubectl rollout status deployment/rolling-deployment
```

Wait for the rollout to finish, then roll back to the previous version (`1.16.1`).

```
kubectl rollout undo deployment/rolling-deployment
```

Check rollout status and the Pods.

```
kubectl rollout status deployment/rolling-deployment

kubectl get pods
```

Copy one of the pod names. Use it to check one of the pod to see that it is using the `1.16.1` image version.

```
kubectl describe pod <Pod name>
```