Chapter 6 - Kubernetes 201 (Reduced version)

Objective

- Manage a Deployment.
- Manage a Service.

Deployment Management

Create an nginx Deployment:

```
kubectl create -f https://k8s.io/examples/application/dep
```

Check your deployment

List all Deployments:

```
kubectl get deployment
```

List the Pods created by the Deployment:

```
kubectl get pods -l app=nginx
```

Upgrade your deployment

Upgrade the nginx container from 1.7.9 to 1.8 by changing the Deployment and calling `apply`. The following config contains the desired changes:

```
kubectl apply -f https://k8s.io/examples/application/depl
```

Watch the Deployment create Pods with new names and delete the old Pods:

```
kubectl get pods -l app=nginx
```

Services

Create an nginx Service:

```
kubectl create -f https://k8s.io/examples/service/nginx-s
```

List all services:

```
kubectl get services
```

Get the service IP and port

Provided the service IP is accessible, you should be able to access its http endpoint with wget on the exposed port:

```
export SERVICE_IP=$(kubectl get service nginx-service -o 
export SERVICE_PORT=$(kubectl get service nginx-service -
```

Check `$SERVICE_IP` and `$SERVICE_PORT`:

```
echo "$SERVICE_IP:$SERVICE_PORT"
```

Verify the service

Then, create a busybox Pod:

```
kubectl run busybox --generator=run-pod/v1 --image=busybo

u@busybox$ wget -qO- http://$SERVICE_IP:$SERVICE_PORT # R
u@busybox$ exit # Exit the busybox container
```

After verification, delete the busybox Pod

```
kubectl delete pod busybox # Clean up the pod we created
```

Delete the nginx Service

To delete the Service by name:

```
kubectl delete service nginx-service
```

Delete the nginx Deployment by name:

```
kubectl delete deployment nginx-deployment
```