Understanding K8s DNS

Relevant Documentation

- DNS for Services and Pods

Lesson Reference

Log in to your Control Plane server.

Create a descriptor that will set up some sample Pods which you can use to test DNS functionality.

```
vi dnstest-pods.yml
```

```
apiVersion: v1
kind: Pod
metadata:
  name: busybox-dnstest
spec:
  containers:
  - name: busybox
    image: radial/busyboxplus:curl
    command: ['sh', '-c', 'while true; do sleep 3600; done']
---
apiVersion: v1
kind: Pod
metadata:
  name: nginx-dnstest
spec:
  containers:
  - name: nginx
    image: nginx:1.19.2
    ports:
    - containerPort: 80
```

```
kubectl create -f dnstest-pods.yml
```

Get the IP address of the `nginx-dnstest` Pod.

```
kubectl get pods nginx-dnstest -o wide
```

Verify that you can reach the `nginx-dnstest` over the cluster network using its IP address.

```
kubectl exec busybox-dnstest -- curl <nginx-dnstest IP address>
```

Use the `busybox-dnstest` Pod to look up the DNS record for the `nginx-dnstest` Pod.

```
kubectl exec busybox-dnstest -- nslookup <nginx-dnstest-ip>.default.pod.cluster.local
```

Verify that you can reach the `nginx-dnstest` Pod using its domain name.

```
kubectl exec busybox -- curl <nginx-dnstest-ip>.default.pod.cluster.local
```