# Service Discovery DNS

1. Create a Service:

$ kubectl create -f services/service-clusterip-single-port.yaml

1. Get the list of Kubernetes services:

$ kubectl get svc --all-namespaces

1. Create a Pod to resolve service via DNS:

$ kubectl run -it --rm --image=yauritux/busybox-curl --restart=Never busybox  
/home # nslookup myservice  
/home # nslookup myservice.<your namespace>  
/home # nslookup myservice.<your namespace>.svc.cluster.local  
/home # exit

🧨 Busybox v1.29+ contains the error in DNS module and can’t resolve properly. Use v1.28 or another image.

1. Clean up the service.

## Solution

1. Create a Service:

$ kubectl create -f services/service-clusterip-single-port.yaml  
service/myservice created

1. Get the list of Kubernetes services:

$ kubectl get svc --all-namespaces  
NAMESPACE NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE  
default kubernetes ClusterIP 10.96.0.1 <none> 443/TCP 37h  
default myservice ClusterIP 10.104.114.28 <none> 80/TCP 4s  
kube-system kube-dns ClusterIP 10.96.0.10 <none> 53/UDP,53/TCP,9153/TCP 37h

1. Create a Pod to resolve service via DNS:

$ kubectl run busybox --image=yauritux/busybox-curl -it --rm  
If you don't see a command prompt, try pressing enter.  
  
/home # nslookup myservice  
Server: 10.96.0.10  
Address 1: 10.96.0.10 kube-dns.kube-system.svc.cluster.local  
Name: myservice  
Address 1: 10.110.223.91 myservice.default.svc.cluster.local  
  
/home # nslookup myservice.default  
Server: 10.96.0.10  
Address 1: 10.96.0.10 kube-dns.kube-system.svc.cluster.local  
Name: myservice.default  
Address 1: 10.110.223.91 myservice.default.svc.cluster.local  
  
/home # nslookup myservice.default.svc.cluster.local  
Server: 10.96.0.10  
Address 1: 10.96.0.10 kube-dns.kube-system.svc.cluster.local  
Name: myservice.default.svc.cluster.local  
Address 1: 10.110.223.91 myservice.default.svc.cluster.local  
  
/home # exit  
Session ended, resume using 'kubectl attach busybox -c busybox -i -t' command when the pod is running  
pod "busybox" deleted

1. Clean up the service.

$ kubectl delete -f services/service-clusterip-single-port.yaml  
service "myservice" deleted