Service Extra

07 January 2021 09:19

ClusterIP

- **"--port " is mandatory field - either in resource definition or in the expose command**
  - **Service port** (service is going to server on)
- **--target-port='': Name or number for the port on the container that the service should direct traffic to.**
  - **Optional** (it will use same as "--port", if not defined)
- **--type='': Type for this service: ClusterIP, NodePort, LoadBalancer, or ExternalName.**
  - **Default** is 'ClusterIP'.
- Endpoint = POD

Exposed POD

```
[root@k8s-master day3]# kubectl  get all --show-labels
NAME                                    READY   STATUS    RESTARTS   AGE     LABELS
pod/nginx                               1/1     Running   0          3h10m   app=nginx,locatioin=in,tier=frontend
pod/nginx-mydeploy-6b4bc7c9df-dt84j     1/1     Running   0          11m     pod-template-hash=6b4bc7c9df,run=mynginx
pod/nginx-mydeploy-6b4bc7c9df-kznz7     1/1     Running   0          11m     pod-template-hash=6b4bc7c9df,run=mynginx
pod/nginx-mydeploy-6b4bc7c9df-rv7z8     1/1     Running   0          11m     pod-template-hash=6b4bc7c9df,run=mynginx
pod/nginx-mydeploy-6b4bc7c9df-wtc2s     1/1     Running   0          11m     pod-template-hash=6b4bc7c9df,run=mynginx
pod/nginx-prod                          1/1     Running   0          3h22m   app=nginx,environment=production
pod/nginx-qa                            1/1     Running   0          3h22m   app=nginx,environment=qa

NAME                 TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE   LABELS
service/kubernetes   ClusterIP   10.96.0.1    <none>        443/TCP   35h   component=apiserver,provider=kubernetes

NAME                                READY   UP-TO-DATE   AVAILABLE   AGE   LABELS
deployment.apps/nginx-mydeploy      4/4     4            4           44m   run=mynginx

NAME                                           DESIRED   CURRENT   READY   AGE   LABELS
replicaset.apps/nginx-mydeploy-6b4bc7c9df      4         4         4       34m   pod-template-hash=6b4bc7c9df,run=mynginx
replicaset.apps/nginx-mydeploy-75577696bd      0         0         0       44m   pod-template-hash=75577696bd,run=mynginx
replicaset.apps/nginx-mydeploy-d8b97d5bf       0         0         0       18m   pod-template-hash=d8b97d5bf,run=mynginx
[root@k8s-master day3]#
```

```
[root@k8s-master day3]# kubectl expose pod nginx-prod --port 82 --target-port 80 --name nginxproduction
service/nginxproduction exposed
[root@k8s-master day3]# kubectl describe svc nginxproduction
Name:              nginxproduction
Namespace:         default
Labels:            app=nginx
                   environment=production
Annotations:       <none>
Selector:          app=nginx,environment=production
Type:              ClusterIP
IP Families:       <none>
IP:                10.106.241.231
IPs:               10.106.241.231
Port:              <unset>  82/TCP
TargetPort:        80/TCP
Endpoints:         192.168.3.63:80
Session Affinity:  None
Events:            <none>
[root@k8s-master day3]#
```

```
[root@k8s-master day3]# kubectl  get pods -o wide
NAME                                READY   STATUS    RESTARTS   AGE     IP              NODE      NOMINATED NODE   READINESS GATES
nginx                               1/1     Running   0          3h21m   192.168.2.56    worker2   <none>           <none>
nginx-mydeploy-6b4bc7c9df-dt84j     1/1     Running   0          22m     192.168.3.94    worker3   <none>           <none>
nginx-mydeploy-6b4bc7c9df-kznz7     1/1     Running   0          22m     192.168.3.95    worker3   <none>           <none>
nginx-mydeploy-6b4bc7c9df-rv7z8     1/1     Running   0          22m     192.168.3.93    worker3   <none>           <none>
nginx-mydeploy-6b4bc7c9df-wtc2s     1/1     Running   0          22m     192.168.2.75    worker2   <none>           <none>
nginx-prod                          1/1     Running   0          3h34m   192.168.3.63    worker3   <none>           <none>
nginx-qa                            1/1     Running   0          3h34m   192.168.2.55    worker2   <none>           <none>
[root@k8s-master day3]#
```

Access clusterIP service using ServiceIP

- From the Master
- Woker2
- Worker3 (pod is hosted) - **Accessible**

```
^C
[root@worker3 ~]# curl http://10.106.241.231:82
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully insta
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
[root@worker3 ~]#
[root@worker3 ~]#
[root@worker3 ~]#
[root@worker3 ~]#
[root@worker3 ~]#
```

```
 login as: root
 root@192.168.1.73's password:
Last login: Wed Jan  6 09:25:28 2021 from 192.168.1.166
[root@k8s-master ~]# ssh root@worker2
The authenticity of host 'worker2 (192.168.1.75)' can't be established.
ECDSA key fingerprint is SHA256:FQEXlcobQTOKqL2AA+QV/LExYV+JA8OUWeV0vCItjuo.
ECDSA key fingerprint is MD5:07:32:33:e2:11:bf:2c:f5:ac:f5:e1:82:84:35:89:29.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'worker2,192.168.1.75' (ECDSA) to the list of known hosts.
root@worker2's password:
Last login: Wed Jan  6 02:32:16 2021 from 192.168.1.166
[root@worker2 ~]# curl http://10.106.241.231:82
```

```
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
[root@k8s-master day3]# curl http://10.106.241.231:82
curl: (7) Failed connect to 10.106.241.231:82; Connection timed out
[root@k8s-master day3]#
```

Exposed deployment

Access clusterIP service using ServiceIP

- From the Master - **Not Accessible**
- Woker2 - **Not Accessible**
- Worker3 - **Not Accessible**
  - □

```
[root@k8s-master day3]# kubectl expose deployment nginx-mydeploy --port 85 --target-port 80 --name mydeploysvc
service/mydeploysvc exposed
[root@k8s-master day3]# kubectl  get svc
NAME              TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)   AGE
kubernetes        ClusterIP   10.96.0.1        <none>        443/TCP   36h
mydeploysvc       ClusterIP   10.99.69.246     <none>        85/TCP    6s
nginxproduction   ClusterIP   10.106.241.231   <none>        82/TCP    23m
```

```
nginx-mydeploy-75577696bd-dz5nc   1/1     Running   0          2m28s
nginx-mydeploy-75577696bd-rpbsk   1/1     Running   0          2m28s
nginx-mydeploy-75577696bd-x4g8c   1/1     Running   0          2m28s
nginx-prod                        1/1     Running   0          4h4m
nginx-qa                          1/1     Running   0          4h4m
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]# ssh root@worker3
root@worker3's password:
Last login: Wed Jan  6 11:24:36 2021 from k8s-master
[root@worker3 ~]# curl http://10.99.69.246:85
```

```
[root@worker2 ~]# curl http://10.99.69.246:85
```

```
[root@k8s-master day3]# kubectl get svc
NAME              TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)   AGE
kubernetes        ClusterIP   10.96.0.1        <none>        443/TCP   36h
mydeploysvc       ClusterIP   10.99.69.246     <none>        85/TCP    9m5s
nginxproduction   ClusterIP   10.106.241.231   <none>        82/TCP    32m
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]# curl http://10.99.69.246:85
```

- POD - withing the same deployment are able to access services within the cluster using ClusterIP service IP
  - □ Pods not part of **the deployment** are not able to access clusterIP service

```
[root@k8s-master day3]# kubectl exec nginx-mydeploy-75577696bd-dz5nc -it /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
root@nginx-mydeploy-75577696bd-dz5nc:/# hostname -i
192.168.3.97
root@nginx-mydeploy-75577696bd-dz5nc:/# curl http://10.99.69.246:85
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
```

```
[root@k8s-master day3]# kubectl exec nginx-mydeploy-75577696bd-dz5nc -it /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
root@nginx-mydeploy-75577696bd-dz5nc:/# hostname -i
192.168.3.97
root@nginx-mydeploy-75577696bd-dz5nc:/# curl http://10.99.69.246:85
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
root@nginx-mydeploy-75577696bd-dz5nc:/#
```

```
nginx                          1/1     Running   0          4h      192.168.2.56   worker2   <none>           <none>
nginx-mydeploy-75577696bd-b7p5t   1/1     Running   0          10m     192.168.3.99   worker3   <none>           <none>
nginx-mydeploy-75577696bd-dz5nc   1/1     Running   0          10m     192.168.3.97   worker3   <none>           <none>
nginx-mydeploy-75577696bd-rpbsk   1/1     Running   0          10m     192.168.2.78   worker2   <none>           <none>
nginx-mydeploy-75577696bd-x4g8c   1/1     Running   0          10m     192.168.3.98   worker3   <none>           <none>
nginx-prod                     1/1     Running   0          4h12m   192.168.3.63   worker3   <none>           <none>
nginx-qa                       1/1     Running   0          4h12m   192.168.2.55   worker2   <none>           <none>
[root@k8s-master day3]# kubectl  exec ng-test -it /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
root@ng-test:/# hostname -i
192.168.2.76
root@ng-test:/# curl http://10.99.69.246:85
```

Across deployments access services using clusterIP

- Output - accessible

```
[root@k8s-master day3]# cat deployment.yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  creationTimestamp: null
  labels:
    run: database
  name: database
spec:
  replicas: 4
  selector:
    matchLabels:
      run: database
  strategy: {}
  template:
    metadata:
      creationTimestamp: null
      labels:
        run: database
    spec:
      containers:
      - image: nginx
        name: nginx
        resources: {}
status: {}
[root@k8s-master day3]# kubectl  create -f deployment.yaml
deployment.apps/database created
[root@k8s-master day3]# kubectl  get deployments.apps
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
database         0/4     4            0           6s
nginx-mydeploy   4/4     4            4           104m
[root@k8s-master day3]#
```

```
[root@k8s-master day3]# kubectl expose deployment database --port 88 --target-port 80 --name databasesvc
service/databasesvc exposed
[root@k8s-master day3]# kubectl get pods -o wide
NAME                              READY   STATUS    RESTARTS   AGE     IP              NODE      NOMINATED NODE   READINESS GATES
database-7dc847dbdf-5qmmd         1/1     Running   0          2m21s   192.168.2.80    worker2   <none>           <none>
database-7dc847dbdf-5sqqx         1/1     Running   0          2m21s   192.168.2.79    worker2   <none>           <none>
database-7dc847dbdf-h816k         1/1     Running   0          2m21s   192.168.3.100   worker3   <none>           <none>
database-7dc847dbdf-128zb         1/1     Running   0          2m21s   192.168.3.101   worker3   <none>           <none>
ng-test                           1/1     Running   0          33m     192.168.2.76    worker2   <none>           <none>
ng-test2                          1/1     Running   0          33m     192.168.2.77    worker2   <none>           <none>
ng-test3                          1/1     Running   0          33m     192.168.3.96    worker3   <none>           <none>
nginx                             1/1     Running   0          4h11m   192.168.2.56    worker2   <none>           <none>
nginx-mydeploy-75577696bd-b7p5t   1/1     Running   0          22m     192.168.3.99    worker3   <none>           <none>
nginx-mydeploy-75577696bd-dz5nc   1/1     Running   0          22m     192.168.3.97    worker3   <none>           <none>
nginx-mydeploy-75577696bd-rpbsk   1/1     Running   0          22m     192.168.2.78    worker2   <none>           <none>
nginx-mydeploy-75577696bd-x4g8c   1/1     Running   0          22m     192.168.3.98    worker3   <none>           <none>
nginx-prod                        1/1     Running   0          4h24m   192.168.3.63    worker3   <none>           <none>
nginx-qa                          1/1     Running   0          4h24m   192.168.2.55    worker2   <none>           <none>
```

```
[root@k8s-master day3]# kubectl exec -it database-7dc847dbdf-h816k /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
root@database-7dc847dbdf-h816k:/# curl http://10.99.69.246:85
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
```

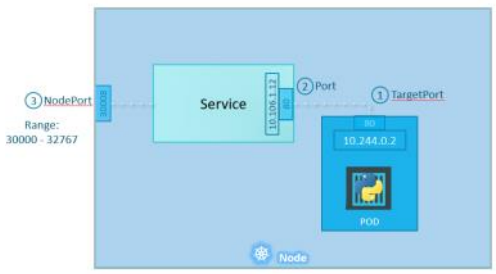
```
[root@k8s-master day3]# kubectl exec -it database-7dc847dbdf-h816k /bin/bash
kubectl exec [POD] [COMMAND] is DEPRECATED and will be removed in a future version. Use kubectl exec [POD] -- [COMMAND] instead.
root@database-7dc847dbdf-h816k:/# curl http://10.99.69.246:85
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
root@database-7dc847dbdf-h816k:/# exit
```

Node Port

- **"--port " is mandatory field - either in resource definition or in the expose command**
  - **Service port** (service is going to server on)
- **--target-port='': Name or number for the port on the container that the service should direct traffic to.**
  - **Optional** (it will use same as "--port", if not defined)
- **--type='': Type for this service: ClusterIP, NodePort, LoadBalancer, or ExternalName.**
  - **Default** is 'ClusterIP'.
- Endpoint = POD

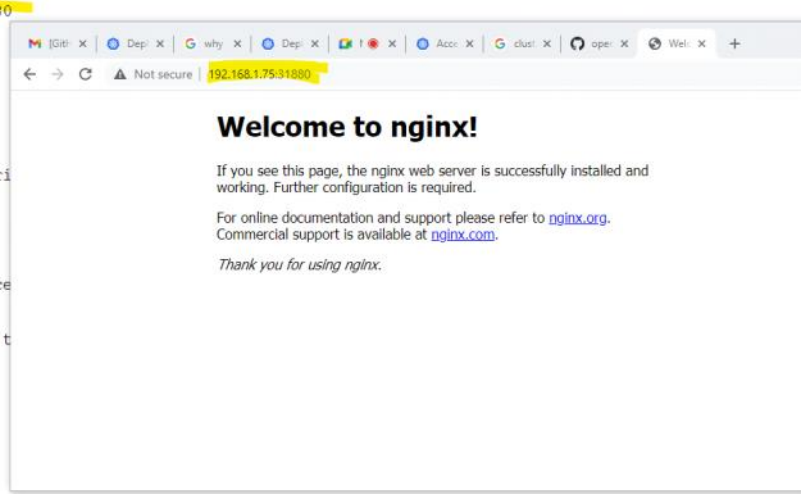
```
[root@k8s-master day3]# kubectl  get svc
NAME              TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)    AGE
databasesvc       ClusterIP   10.107.31.182    <none>        88/TCP     11m
kubernetes        ClusterIP   10.96.0.1        <none>        443/TCP    37h
mydeploysvc       ClusterIP   10.99.69.246     <none>        85/TCP     40m
nginxproduction   ClusterIP   10.106.241.231   <none>        82/TCP     63m
[root@k8s-master day3]# kubectl  get deployments.apps
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
database         4/4     4            4           13m
nginx-mydeploy   4/4     4            4           117m
[root@k8s-master day3]# kubectl expose deployment nginx-mydeploy --name mysvcnodeport --port 90 --target-port 80 --type NodePort
service/mysvcnodeport exposed
[root@k8s-master day3]# kubectl  get svc
NAME              TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
databasesvc       ClusterIP   10.107.31.182    <none>        88/TCP           12m
kubernetes        ClusterIP   10.96.0.1        <none>        443/TCP          37h
mydeploysvc       ClusterIP   10.99.69.246     <none>        85/TCP           40m
mysvcnodeport     NodePort    10.100.65.34     <none>        90:31880/TCP     4s
nginxproduction   ClusterIP   10.106.241.231   <none>        82/TCP           63m
[root@k8s-master day3]# kubectl  describe svc mysvcnodeport
Name:                     mysvcnodeport
Namespace:                default
Labels:                   run=mynginx
Annotations:              <none>
Selector:                 run=mynginx
Type:                     NodePort
IP Families:              <none>
IP:                       10.100.65.34
IPs:                      10.100.65.34
Port:                     <unset>  90/TCP
TargetPort:               80/TCP
NodePort:                 <unset>  31880/TCP
Endpoints:                192.168.2.78:80,192.168.3.97:80,192.168.3.98:80 + 1 more...
Session Affinity:         None
External Traffic Policy:  Cluster
Events:                   <none>
[root@k8s-master day3]#
```

Nodeport -31880
Port - 90
Target port - 80



Service accessible from outside of the cluster using NodePort IP (+port)

```
[root@k8s-master day3]# kubectl get nodes -o wide
NAME          STATUS     ROLES                  AGE   VERSION   INTERNAL-IP    EXTERNAL-IP   OS-IMAGE                KERNEL-VERSION
R-RUNTIME
k8s-master    Ready      control-plane,master   37h   v1.20.1   192.168.1.73   <none>        CentOS Linux 7 (Core)   3.10.0-1160.11.1.el7.
/19.3.11
worker1       NotReady   <none>                 36h   v1.20.1   192.168.1.74   <none>        CentOS Linux 7 (Core)   3.10.0-1160.11.1.el7.
/19.3.11
worker2       Ready      <none>                 36h   v1.20.1   192.168.1.75   <none>        CentOS Linux 7 (Core)   3.10.0-1160.11.1.el7.
/19.3.11
worker3       Ready      <none>                 35h   v1.20.1   192.168.1.64   <none>        CentOS Linux 7 (Core)   3.10.0-1160.11.1.el7.
/19.3.11
[root@k8s-master day3]# curl http://192.168.1.75:31880
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-seri
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is succe
working. Further configuration is required.</p>

<p>For online documentation and support please refer t
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
[root@k8s-master day3]#
```



Service accessible with NodePort IP (+port)

- Only from wokernodes
  - Because nodeport in backend uses clusterIP

```
[root@k8s-master day3]# kubectl  get svc
NAME              TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
databasesvc       ClusterIP   10.107.31.182    <none>        88/TCP           12m
kubernetes        ClusterIP   10.96.0.1        <none>        443/TCP          37h
mydeploysvc       ClusterIP   10.99.69.246     <none>        85/TCP           40m
mysvcnodeport     NodePort    10.100.65.34     <none>        90:31880/TCP     4s
nginxproduction   ClusterIP   10.106.241.231   <none>        82/TCP           63m
```

```
[root@k8s-master day3]# kubectl get  svc mysvcnodeport -o yaml | tail -15
  clusterIP: 10.100.65.34
  clusterIPs:
  - 10.100.65.34
  externalTrafficPolicy: Cluster
  ports:
  - nodePort: 31880
    port: 90
    protocol: TCP
    targetPort: 80
  selector:
    run: mynginx
  sessionAffinity: None
  type: NodePort
status:
  loadBalancer: {}
[root@k8s-master day3]#
```

```
[root@worker3 ~]# curl http://10.100.65.34:90
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
[root@worker3 ~]#
```

```
[root@worker2 ~]# curl http://10.99.69.246:85
curl: (7) Failed connect to 10.99.69.246:85; Connection timed out
[root@worker2 ~]# curl http://10.100.65.34:90
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
[root@worker2 ~]#
```

```
IPs:                      10.100.65.34
Port:                     <unset>  90/TCP
TargetPort:               80/TCP
NodePort:                 <unset>  31880/TCP
Endpoints:                192.168.2.78:80,192.168.3.97:80,192.168.3.98:80 + 1 more...
Session Affinity:         None
External Traffic Policy:  Cluster
Events:                   <none>
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]#
[root@k8s-master day3]# curl http://10.100.65.34:90
```

LoadBalancer

- **"--port " is mandatory field - either in resource definition or in the expose command**
  - **Service port** (service is going to server on)
- **--target-port='': Name or number for the port on the container that the service should direct traffic to.**
  - **Optional** (it will use same as "--port", if not defined)
- **--type='': Type for this service: ClusterIP, NodePort, LoadBalancer, or ExternalName.**
  - **Default** is 'ClusterIP'.
- Endpoint = POD

```
[root@k8s-master day3]# kubectl  get deployments.apps
NAME             READY   UP-TO-DATE   AVAILABLE   AGE
database         4/4     4            4           27m
nginx-mydeploy   4/4     4            4           131m
[root@k8s-master day3]# kubectl get svc
NAME              TYPE        CLUSTER-IP       EXTERNAL-IP   PORT(S)        AGE
databasesvc       ClusterIP   10.107.31.182    <none>        88/TCP         25m
kubernetes        ClusterIP   10.96.0.1        <none>        443/TCP        37h
mydeploysvc       ClusterIP   10.99.69.246     <none>        85/TCP         53m
mysvcnodeport     NodePort    10.100.65.34     <none>        90:31880/TCP   13m
nginxproduction   ClusterIP   10.106.241.231   <none>        82/TCP         77m
[root@k8s-master day3]# kubectl  expose deployment nginx-mydeploy --name mysvclb --port 95 --target-port 80 --type LoadBalancer
service/mysvclb exposed
[root@k8s-master day3]# kubectl describe svc mysvclb
Name:                     mysvclb
Namespace:                default
Labels:                   run=mynginx
Annotations:              <none>
Selector:                 run=mynginx
Type:                     LoadBalancer
IP Families:              <none>
IP:                       10.111.208.66
IPs:                      10.111.208.66
Port:                     <unset>  95/TCP
TargetPort:               80/TCP
NodePort:                 <unset>  31557/TCP
Endpoints:                192.168.2.78:80,192.168.3.97:80,192.168.3.98:80 + 1 more...
Session Affinity:         None
External Traffic Policy:  Cluster
Events:                   <none>
[root@k8s-master day3]#
```

```
[root@k8s-master day3]# kubectl get svc mysvclb -o yaml | tail -20
  name: mysvclb
  namespace: default
  resourceVersion: "82325"
  uid: beba675d-b760-4b61-a146-a0f8fce1234b
spec:
  clusterIP: 10.111.208.66
  clusterIPs:
  - 10.111.208.66
  externalTrafficPolicy: Cluster
  ports:
  - nodePort: 31557
```

```
[root@k8s-master day3]# kubectl get svc mysvclb -o yaml | tail -20
  name: mysvclb
  namespace: default
  resourceVersion: "82325"
  uid: beba675d-b760-4b61-a146-a0f8fce1234b
spec:
  clusterIP: 10.111.208.66
  clusterIPs:
  - 10.111.208.66
  externalTrafficPolicy: Cluster
  ports:
  - nodePort: 31557
    port: 95
    protocol: TCP
    targetPort: 80
  selector:
    run: mynginx
  sessionAffinity: None
  type: LoadBalancer
status:
  loadBalancer: {}
[root@k8s-master day3]#
```

```
[root@k8s-master day3]# kubectl  get svc
NAME              TYPE           CLUSTER-IP       EXTERNAL-IP   PORT(S)          AGE
databasesvc       ClusterIP      10.107.31.182    <none>        88/TCP           30m
kubernetes        ClusterIP      10.96.0.1        <none>        443/TCP          37h
mydeploysvc       ClusterIP      10.99.69.246     <none>        85/TCP           58m
mysvclb           LoadBalancer   10.111.208.66    <pending>     95:31557/TCP     3m30s
mysvcnodeport     NodePort       10.100.65.34     <none>        90:31880/TCP     18m
nginxproduction   ClusterIP      10.106.241.231   <none>        82/TCP           82m
[root@k8s-master day3]#
```

Service LB for now is accessible within cluster ONLY

- As we don't have external IP address