Kubernetes – Service Creation

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What is Services?

- Problem statement
  - Kubernetes portal are Mortal.
  - Every time the POD gets a new IP address.
  - This would be a trouble if we want inter POD communication.
  - Also to keep a track of the IP's of the POD.

- Solution:
  - **SERVICES**

Creating Services

```
---
apiVersion: v1
kind: Service
metadata:
    name: node-port
spec:
    type: NodePort
    ports:
        – port: 88
          targetPort: 8000
          nodePort: 30303
     selector:
        component: rss-site
```

Let's look at each piece closer

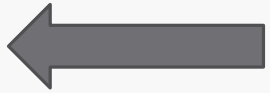
```
---
apiVersion: v1
kind: Service
metadata:
    name: node-port
```

Object type is Service.
The Service object has sub objects

- **ClusterIP**
- **NodePort**
- **LoadBalancer**
- **Ingress**

Let’s look at each piece closer

```
---
apiVersion: v1
kind: Service
metadata:
    name: node-port
```



Metadata for the Service

We Could have anykind of **Key:Value** pair for labels.

Let's look at each piece closer

```
.....
spec:
  type: NodePort
    ports:
      – port: 88
        targetPort: 8000
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```

Actual Objects that defines the Service.

Let's look at each piece closer

```
.....
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      targetPort: 8000
      nodePort: 30303
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    component: rss-site
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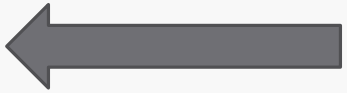

The NodePort exposes the container to the outside world

Very Useful for Dev Environment

Let's look at each piece closer

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  ports:
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      targetPort: 88
      nodePort: 30303
  selector:
    component: rss-site
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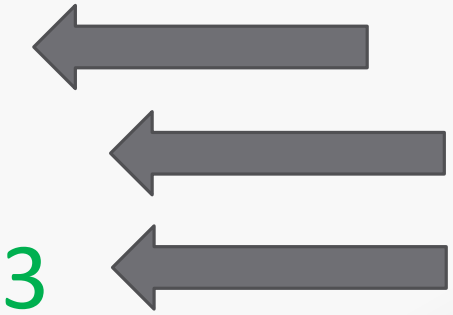
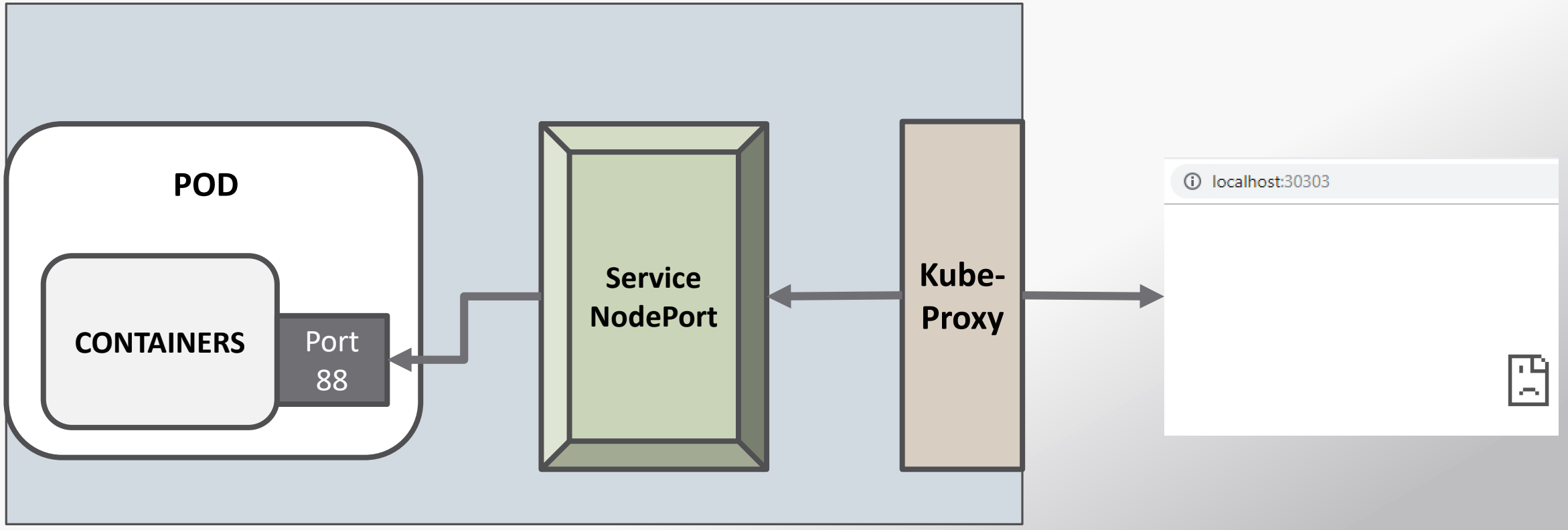


POD's that need multi-POD connectivity

Container Port

Host (VM) Port
Port range could be (30000-32767)
Random number would be assign, if we don't mention it.

BLOCK DIAGRAM



Let’s look at each piece closer

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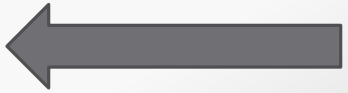

This is in pair with “Labels” declared in the “POD”.

kubectl commands

To run the yml file on the Kube Cluster.

$ kubectl apply -k <yml filename>

To check the pod status

$ kubectl get services