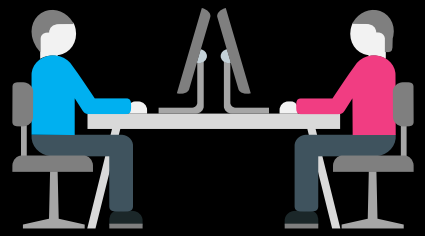
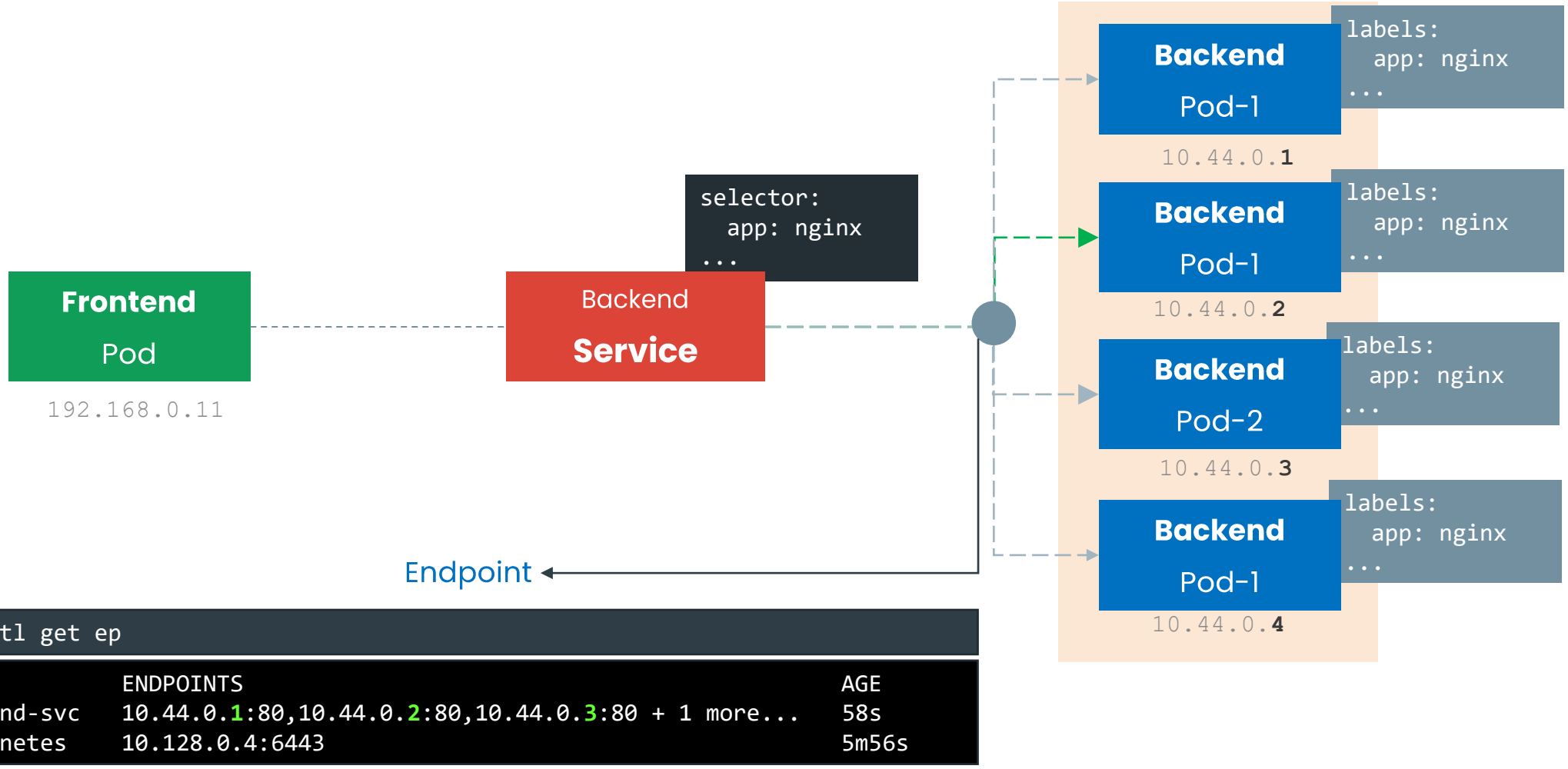
Endpoints



WHAT IS A Service Discovery?




```
kubectl get ep
```

```
NAME          ENDPOINTS                                        AGE
backend-svc   10.44.0.1:80,10.44.0.2:80,10.44.0.3:80 + 1 more...   58s
kubernetes    10.128.0.4:6443                                  5m56s
```

EXAMPLE-1: CREATING ENDPOINT **MANUALLY**

Service

```yaml
kind: Service
apiVersion: v1
metadata:
  name: external-web
spec:
  ports:
  - name: apache
    protocol: TCP
    port: 80
```

Endpoint

```yaml
kind: Endpoints
apiVersion: v1
metadata:
  name: external-web
subsets:
 - addresses:
     - ip: 192.0.2.24 #The IP Address of the external web server
   ports:
     - port: 80
       name: apache
```

NETWORKING

Deployment (Backend)

```yaml
apiVersion: apps/v1
kind: Deployment
metadata:
  name: backend-deploy
  labels:
    app: nginx
spec:
  replicas: 4
  selector:
    matchLabels:
      app: backend-pod
  template:
    metadata:
      labels:
        app: backend-pod
    spec:
      containers:
      - name: nginx-container
        image: nginx
        ports:
        - containerPort: 80
```

Service (Backend) (This automatically creates the backend)

```yaml
apiVersion: v1
kind: Service
metadata:
  name: backend-svc
spec:
  ports:
  - name: http
    port: 80
    targetPort: 80
    protocol: TCP
  selector:
    app: backend-pod
```

NETWORKING

```
kubectl get svc
```

```
NAME          TYPE        CLUSTER-IP      EXTERNAL-IP   PORT(S)   AGE
backend-svc   ClusterIP   10.103.79.239   <none>        80/TCP    8s
kubernetes    ClusterIP   10.96.0.1       <none>        443/TCP   16m
```

```
kubectl get ep
```

```
NAME          ENDPOINTS                                          AGE
backend-svc   10.44.0.1:80,10.44.0.2:80,10.44.0.3:80 + 1 more...   58s
kubernetes    10.128.0.4:6443                                    5m56s
```

```
kubectl get pods -o wide
```

```
NAME                       READY   STATUS    RESTARTS   AGE   IP          NODE      NOMINATED NODE   READINESS GATES
backend-64989f475c-5x6g9   1/1     Running   0          70s   10.44.0.3   worker1   <none>           <none>
backend-64989f475c-7gmn7   1/1     Running   0          70s   10.44.0.1   worker2   <none>           <none>
backend-64989f475c-n8g6d   1/1     Running   0          70s   10.44.0.2   worker3   <none>           <none>
backend-64989f475c-s7qvl   1/1     Running   0          70s   10.44.0.4   worker1   <none>           <none>
```