Week4 : 26.06.23 – 30.06.23

Setup Worker Nodes and Deploy Applications on K8s Cluster

- ➔ This week, I setup two more worker nodes.
- ➔ I successfully deployed the test application on workernode1. The applications are deployed and running on pods.
- ➔ I started looking for T4P4S alternative for P4 compilers.

Deploying applications on specific node

Added a label to workernode1;

kubectl label nodes workernode1 p4kube=applications

Modify the manifest file by adding a nodeSelector, i.e;

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx
  labels:
    app: nginx
spec:
  replicas: 1
  selector:
    matchLabels:
      app: nginx
  template:
    metadata:
      labels:
        app: nginx
    spec:
      containers:
      - name: nginx
        image: unit:go1.20
        ports:
        - containerPort: 80
      nodeSelector:
        p4kube: applications
```

P4C-DPDK Compiler, an alternative to T4P4s

P4c-dpdk translates the P4 programs to DPDK API to configure DPDK software switch (SWX)* pipeline. Similar to T4P4s, it translates the P4 program to the representation that conforms to DPDK SWX pipeline and generates the file to configure DPDK pipeline.

*DPDK-software switch is a packet forwarding software component that utilizes the DPDK library to achieve high performance packet processing on hardware.

References

P4c-dpdk

White Paper: Timestamping and Clock Synchronization in P4-programmable Platforms