

Hyperledger Fabric v2.x on Kubernetes

Course Content –

1. Introduction

2. Kubernetes Cluster Setup

Installing Kubectl

Installing Kubernetes IDE

Creating Kubernetes Cluster

Create NFS Server

Mounting NFS Drive to Local System

Adding PV and PVC to Kubernetes Cluster

Running sample application on kubernetes

3. Fabric CA Server

Moving CA configuration to NFS Server

Starting Up Fabric CA Server - Part 1

Starting Up Fabric CA Server - Part 2

4. Generating Certificates and Artifacts

Generating Certificates For Peers and Orderers

Generating genesis block and channel transaction

5. Starting Ordering Services

Creating Deployment for orderers

Creating services for Orderers

Starting up orderers

6. Starting Peer Services

Prerequisite - Configuration

Creating Deployment for peers

Creating Peer Services

Setting up CLI for all the Peers
Starting up the Peer Nodes

7.Channel Operations

Creating Application Channel
Joining Application Channel
Updating Anchor Peers

8.Chaincode Operation

introduction to external chaincode
Packaging chaincode
Installing chaincode
Create Chaincode Deployment
Creating Chaincode Service and Starting them
Approve chaincode
Committing chaincode
Transaction invocation
Accessing CouchDB

9.API Server

Registering User - API Server 1
Transaction and Query - API Server 2
Creating Connection Profile
Overriding Fabric CA Default Configuration
Creating API Server Deployment
Starting API Server

10.Frontend Application

Project Setup
Implementing UI functionalities
Integrating API's and Testing UI Application
Frontend Application deployment

11.Hyperledger Explorer Integration

Understanding Hyperledger Explorer

Creating Hyperledger Explorer Deployment
Starting Hyperledger Explorer Service

12. Setting up Monitoring Service

Introduction to Prometheus and Grafana
Creating Monitoring Service
Starting Monitoring Service

13. Setting up Ingress Controller

Ingress Setup
Domain Setup with Ingress
Encrypt - SSL Integration using Cert Manager