

## OKD (Origin Kubernetes Distribution)

### 1. The OKD Container Platform.

- The Role of Containers & Container Orchestration
- Introduction to OKD
- Kubernetes and OKD Architecture
- Installation of OKD

### 2. Introduction To Docker

- Installation of Docker
- Docker Essential Commands
- Creating Containers
- Managing Data in Docker
- Docker Networking
- Docker Repositories
- Build Images
- Docker File

### 3. Core Concepts of OKD

- Pods
- Services
- Replication Controllers
- Persistent Volume(PV)
- Persistent Volume Claim(PVC)
- Deployment Config
- Build Config

### 4. Managing OKD

- Introduction to YAML
- Creating and Managing Pods
- Init Containers
- Labels & Selector
- Managing Replication Controllers

### 5. Managing Service And Route

- Managing Services-> ClusterIP, NodePort
- Working With Routes
- Give privilege to Pods
- Create NGINX and SQL Application

## **6. Managing Users & Policies**

- Introduction to User and Group
- Managing Users & Groups
- Managing User Labels
- Limiting Number of Self-Provisioned Projects Per User

## **7. Deployment Config and Build Config**

- Introduction to Deployment Config and Build Config
- (Source-To-Image)S2I Build
- Create and Manage Build from GitHub Source Code

## **8. Managing Environment Variables**

- Passing Environment Variables
- Plain Key Value
- Managing Config Maps
- Handling of Secret Information

## **9. Security**

- Self-Provisioning Projects
- Disable Self-Provisioning
- Creating and Managing Service Account
- Managing Role Based Access Control(RBAC)
- Managing Security Context Constraints(SCC)

## **10. Manual Scheduling**

- Introduction to Scheduler
- Taints and Tolerations
- Node Selector
- Node Affinity
- Taint and Tolerations vs Node Affinity
- Daemon Set

## **11. Resource Quota and Limits**

- What Is Managed by Quotas
- Quotas versus Limit Ranges
- Requests Versus Limits
- Resource Requirements
- Overriding Build Resources

## **12. Managing Nodes**

- Basic Node Commands
- Adding Nodes in Cluster
- Deletes Nodes from Cluster
- Marking Nodes as Unschedulable or Schedulable

## **13. Managing Storage**

- Understand persistent volumes and know how to create them.
- Understand access modes for volumes.
- Understand persistent volume claims primitive.
- Know how to configure applications with persistent storage.