

Day - 1

- **Introduction**

- Understanding the Need of Kubernetes
- Understanding Kubernetes Architecture
- Understanding Kubernetes Masters and its Component
- Understanding Kubernetes Nodes and its Component
- Understand Kubernetes Concepts
- Understand Kubernetes Terminology
- Kubernetes Clusters Requirements

- **Kubernetes Clusters**

- Understanding Kubernetes Clusters using kubeadm
- Demo: Installing and Configuring Kubernetes Master
- Demo: Installing and Configuring Kubernetes Workers
- Demo: Install and Configure Workstation using Kubectl
- Understanding a concept of Namespace
- Demo: Define your first Kubernetes pod
- Demo: Working and Deep Dive with Kubernetes pod

- **Kubernetes Controllers**

- Understanding Kubernetes replication controllers
- Demo: Define your first replication controllers
- Demo: Working with Kubernetes replication controllers
- Understanding Kubernetes deployments
- Demo: Define your first deployment
- Demo: Working and Deep Dive with Kubernetes deployment
- Understanding Kubernetes Labels

- **Kubernetes Labels**

- Demo: Define your first Kubernetes Labels
- Demo: Working with Kubernetes Labels
- Understanding Kubernetes Services
- Demo: Define your first Kubernetes Services
- Demo: Working and Deep Dive with Kubernetes Services
- Demo: Deploy a Java Stake app using Kubernetes
- Demo: Deploy a Nodejs Stake app using Kubernetes

- **Kubernetes Volumes**

- Understanding Kubernetes Volumes
- Understanding Types of Volumes
- Static and Dynamic Provisioning
- Understanding Persistent Volume and Persistent Volume Claim
- Understanding ConfigMap and Secret
- Understanding Storage Class
- Demo: Working with Persistent Volume and Persistent Volume Claim
- Demo: Working with ConfigMap and Secret

- **Kubernetes Storage**

- Demo: Storage Class
- Understanding StatefulSet and DaemonSet
- Understanding CronJob and Job
- Demo: Working with Working StatefulSet
- Demo: Working with DaemonSet
- Demo: Working with CronJob
- Demo: Working with Job
- Demo: Stateless Example: PHP Guestbook with Redis