# **KUBERNETES ADMINISTRATION(LFS458)**

### Introduction

- Linux Foundation
- Linux Foundation Training
- Linux Foundation Certifications
- Laboratory Exercises, Solutions and Resources
- Distribution Details
- Labs

#### **Basics of Kubernetes**

- Define Kubernetes
- Cluster Structure
- Adoption
- Project Governance and CNCF
- Labs

# Installation and Configuration

- Getting Started With Kubernetes
- Minikube
- kubeadm
- More Installation Tools
- Labs

### **Kubernetes Architecture**

- Kubernetes Architecture
- Networking
- Other Cluster Systems
- Labs

#### APIs and Access

- API Access
- Annotations
- Working with A Simple Pod
- kubectl and API
- Swagger and OpenAPI
- Labs

## **API Objects**

- API Objects
- The v1 Group

- API Resources
- RBAC APIs
- Labs

## Managing State With Deployments

- Deployment Overview
- Managing Deployment States
- Deployments and Replica Sets
- DaemonSets
- Labels
- Labs

## Services

- Overview
- Accessing Services
- DNS
- Labs

### Volumes and Data

- Volumes Overview
- Volumes
- Persistent Volumes
- Passing Data To Pods
- ConfigMaps
- Labs

## Ingress

- Overview
- Ingress Controller
- Ingress Rules
- Labs

## Scheduling

- Overview
- Scheduler Settings
- Policies
- Affinity Rules
- Taints and Tolerations
- Labs

# Logging and Troubleshooting

- Overview
- Troubleshooting Flow
- Basic Start Sequence
- Monitoring

- Logging
- Troubleshooting Resources
- Labs

## **Custom Resource Definition**

- Overview
- Custom Resource Definitions
- Aggregated APIs
- Labs

## **Kubernetes Federation**

- Overview
- Federated Resources
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## Helm

- Overview
- Helm
- Using Helm
- Labs

## Security

- Overview
- Accessing the API
- Authentication and Authorization
- Admission Controller
- Pod Policies
- Network Policies
- Labs