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# Longhorn Deployment and Operations (LHN201)

ID LHN201 Price on request Duration 2 days

## Who should attend

This course is designed for system administrators and other persons responsible for provisioning and administering Kubernetes clusters with Rancher Manager for Rancher Prime.

## Prerequisites

An understanding of Kubernetes objects and resources is needed for this course. This knowledge can be gained through the ! course. Linux command line experience is helpful.

## Course Objectives

Attendees will be taught the following concepts and skills:

- An Introduction to Longhorn
- Installation of Longhorn via Helm and as a Rancher Application
- Management of Nodes
- Management of Disks and Volume Replicas
- Logging and Monitoring of Clusters
- Backing up and Restoring of Volumes
- Disaster Recovery Volumes
- Upgrading Longhorn Manager and Engine

## Course Content

### Section 1: Course Introduction

### Section 2: Introduction to Longhorn

- Introduction to Longhorn
- High-level Overview of Longhorn Features
- Overview of the Longhorn Architecture

### Section 3: Install Longhorn

- Installation Requirements
- Installation with Helm
- Installation as a Rancher Application
- Longhorn Web UI Features

### Section 4: Node Management

- Enable or Disable Nodes
- Add a new Node in Cluster
- Node Maintenance
- Remove a Node from Cluster

### Section 5: Disk and Volumes Management

- Add Individual Disk Partition
- Remove Disk Storage
- Add LVM Storage
- Create a Volume
- Use Trim to Reclaim Storage Space
- Resize Volume
- Tune Storage Performance by Data Locality

### Section 6: High Availability in Longhorn

- Define Replica Counts and Location
- Replica Balancing for even Distribution of Resources

### Section 7: Monitor and Troubleshoot Longhorn

- Install Prometheus and Grafana for Monitoring Longhorn's Vital Metrics
- Integrate Longhorn Metrics with the Rancher Monitoring System
- Configure Longhorn Alert Rules
- Recover from Failures

### Section 8: Longhorn Backup and Restore

- Manually Create a Snapshot of a Volume
- Restore a Volume from a Snapshot Manually
- Delete a Volume Snapshot
- Work with Recurring Volume Snapshot
- Manually Create a Backup of a Volume
- Restore a Volume from a Backup
- Work with Recurring Volume Backups
- Work with Disaster Recovery Volumes

### Section 9: Upgrade Longhorn

- Upgrade Longhorn Manager
- Upgrade Longhorn Engine

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## Training Centres worldwide



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