

Rancher Training

COURSE CONTENT

GET IN TOUCH



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About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

Rancher Training by Multisoft Systems is designed to equip IT professionals, DevOps engineers, and cloud administrators with the expertise required to efficiently deploy, manage, and scale Kubernetes environments using Rancher. As organizations increasingly adopt containerized applications, Rancher has emerged as a powerful multi-cluster Kubernetes management platform that simplifies operations across on-premises and cloud infrastructures.

Module 1: Introduction to Rancher

- ✓ What is Rancher? Architecture & Core Concepts
- ✓ Rancher vs Other Kubernetes Management Platforms
- ✓ Understanding RKE, RKE2, and K3s
- ✓ Rancher Features, Use Cases & Deployment Models

Module 2: Rancher Installation & Configuration

- ✓ System Requirements & Prerequisites
- ✓ Installing Rancher on Single Node & HA Mode
- ✓ Using Docker, Helm, and Kubernetes for Installation
- ✓ Configuring Certificates & External Load Balancers
- ✓ Initial Rancher Setup & Access Control

Module 3: Kubernetes Fundamentals (Quick Refresher)

- ✓ Pods, Deployments, Services, Ingress
- ✓ Namespaces, ConfigMaps & Secrets
- ✓ Storage Classes & Persistent Volumes
- ✓ Cluster Networking Basics

Module 4: Cluster Management with Rancher

- ✓ Adding & Importing Kubernetes Clusters
- ✓ Managing RKE1, RKE2 & K3s Clusters
- ✓ Node Pools, Node Templates & Auto-Provisioning
- ✓ Upgrading & Scaling Kubernetes Clusters
- ✓ Cluster Drivers & Cloud Providers (AWS, Azure, GCP, vSphere)

Module 5: Rancher Access Management & Security

- ✓ Users, Groups, Roles & RBAC
- ✓ Authentication Integration (AD, LDAP, SAML, GitHub, OKTA)

- ✓ Pod Security Policies (PSP) & Pod Security Admission
- ✓ CIS Scans & Cluster Security Hardening
- ✓ Secrets Management & Policies

Module 6: Application Deployment in Rancher

- ✓ Deploying Applications with Rancher UI
- ✓ Using Helm Charts & Catalog Apps
- ✓ Managing Apps with Fleet
- ✓ Working with Workloads, Autoscaling & Probes
- ✓ Canary Deployments & Rollbacks

Module 7: Networking, Load Balancing & Ingress

- ✓ Understanding Rancher Networking
- ✓ CNI Options: Canal, Calico, Flannel
- ✓ Ingress Controllers (NGINX, Traefik)
- ✓ Service Mesh Overview (Istio Integration)

Module 8: Storage & Volume Management

- ✓ Persistent Storage Options
- ✓ Rancher Integration with CSI Drivers
- ✓ Dynamic vs Static Provisioning
- ✓ Backup & Restore Strategies

Module 9: Monitoring, Logging & Alerts

- ✓ Prometheus & Grafana Integration
- ✓ Metrics Monitoring, Dashboards & Alerts
- ✓ Centralized Logging using Fluentd / Elasticsearch
- ✓ Health Checks & Troubleshooting Tools

Module 10: Rancher Multi-Cluster Management

- ✓ Multi-Cluster Dashboard
- ✓ Global Settings, Policies & Governance
- ✓ Cluster Templates & Cluster Overrides
- ✓ Workload Distribution Across Clusters

Module 11: Rancher Fleet – GitOps

- ✓ Introduction to Rancher Fleet Architecture
- ✓ Deploying & Managing Applications with GitOps
- ✓ Creating Bundles & Git Repositories
- ✓ Workspaces, Targets & Multi-Cluster Deployments

Module 12: Backup & Disaster Recovery

- ✓ Backup Strategies for Rancher Server
- ✓ ETCD Backup & Restore
- ✓ Migrating Rancher Deployments
- ✓ Disaster Recovery Scenarios

Module 13: Rancher Troubleshooting & Best Practices

- ✓ Troubleshooting Rancher UI & Cluster Issues
- ✓ Node Failures, Certificate Problems & API Errors
- ✓ Best Practices for Production Deployments
- ✓ Performance Optimization Tips