

SUSE Rancher 2.6 Operations

Course Summary

Description

This three day course is designed for system administrators responsible for deploying and administering multiple Kubernetes cluster distributions with SUSE Rancher.

The course begins with an introduction to SUSE Rancher and its architecture. Students will then learn how to access SUSE Rancher's updated graphical user interface. During the course an existing Kubernetes cluster will be registered and a new RKE cluster will be provisioned with SUSE Rancher and Kubernetes cluster administrative activities will be introduced. The course also covers Kubernetes cluster management and hosted Kubernetes provider's deployments in the public clouds.

The course includes presentations about the provisioning and administration capabilities of SUSE Rancher and extensive hands-on experience with lab exercises.

This course prepares students for the SCA in SUSE Rancher 2.6 exam.

Objectives

At the end of this course, students will be able to:

- An Introduction to SUSE Rancher
- Cluster and Cluster Template Management with SUSE Rancher
- User Management
- Application Management with SUSE Rancher
- Multi-cluster Application Management with Continuous Delivery
- Logging and Monitoring
- Security Scans and Policy Constraint Configuration
- Variety of Shell Based Actions with SUSE Rancher
- Backing up and Restoring Downstream Clusters and SUSE Rancher

Topics

- Course Introduction
- Introduction to Rancher
- Cluster Management with SUSE Rancher
- User Management with SUSE Rancher
- Template Management with SUSE Rancher
- Application Management with SUSE Rancher
- Continuous Delivery with SUSE Rancher
- Logging and Monitoring with SUSE Rancher
- Security Tools with SUSE Rancher
- SUSE Rancher Shell Access
- Backup and Restore with SUSE Rancher

Audience

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

Prerequisites

An understanding of Kubernetes objects and resources is needed for this course. This knowledge can be gained through the KUB201v1.2: Kubernetes Administration course.

Linux command line experience is helpful.

Duration

Three days

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Course Outline

- I. *Course Introduction*
Understand the Course
- II. *Introduction to Rancher*
 - A. Explain the Company and Product Name
 - B. Introduce SUSE Rancher Version 2.6.0
 - C. Explore SUSE Rancher Architecture
 - D. Access SUSE Rancher GUI
 - E. Login to SUSE Rancher User Interface
 - F. Modify SUSE Rancher Cluster Name
- III. *Cluster Management with SUSE Rancher*
 - A. Explore SUSE Rancher GUI
 - B. View Cluster and Node Agents
 - C. Import and Existing Kubernetes Cluster
 - D. Provision an RKE Cluster on Existing Nodes
- IV. *User Management with SUSE Rancher*
 - A. Manage Users and Groups
 - B. Understand Roles
- V. *Template Management with SUSE Rancher*
 - A. Configure RKE Templates
 - B. Manage cluster and Node Drivers
 - C. Configure cloud Credentials
 - D. Introduce Infrastructure Provided Kubernetes Clusters
 - E. Introduce Hosted Kubernetes Clusters
- VI. *Application Management with SUSE Rancher*
 - A. Understand Projects and Namespaces
 - B. Deploy Workloads
 - C. Understand Apps & Marketplace
 - D. Install Applications with Helm
 - E. Configure Quotas
- VII. *Continuous Delivery with SUSE Rancher*
 - A. Introduce Project Fleet
 - B. Understand Continuous Delivery
 - C. Manage Cluster Groups
 - D. Configure continuous Delivery
- VIII. *Logging and Monitoring with SUSE Rancher*
 - A. Deploy Monitoring Stack
 - B. Understand SUSE Rancher Logging
 - C. Configure an External Logging Service for Grafana
- IX. *Security Tools with SUSE Rancher*
 - A. Manage CIS Scans
 - B. Understand OPA Gatekeeper
- X. *SUSE Rancher Shell Access*
 - A. Access Cluster Nodes with ssh
 - B. Access a Downstream Cluster with kubectl
 - C. Understand the SUSE Rancher API
 - D. Introduce SUSE Rancher CLI
- XI. *Backup and Restore with SUSE Rancher*
 - A. Understand SUSE Rancher Backup Requirements
 - B. Create Downstream Cluster Snapshots
 - C. Upgrade Downstream Clusters
 - D. Restore Downstream Clusters
 - E. Backup and Restore SUSE Rancher Server