RAN-104: SUSE Rancher Prime Deployment and Operations (RAN201v2.12)

Course Length: 4 days

Course Description:

This comprehensive training provides an in-depth introduction to SUSE Rancher Prime, covering essential components, architecture, and deployment strategies. Participants will learn to perform critical Kubernetes cluster management and administration tasks, including cluster provisioning, user management, role-based access control, and application deployments.

The course progresses to advanced topics such as security utilities, backup and disaster recovery procedures, monitoring solutions, and logging configurations. This training helps prepare students for the SUSE Certified Administrator (SCA) in SUSE Rancher Prime certification.

Target Audience:

This course is designed for administrators responsible for deploying and managing SUSE Rancher Prime environments. Ideal participants include those tasked with importing and creating downstream clusters, managing authorization frameworks, deploying containerized applications, and implementing security features for Kubernetes infrastructure.

Prerequisites:

Basic understanding of Linux terminal shell operations. Intermediate knowledge of Kubernetes concepts and operations. Familiarity with YAML manifest file syntax.

Detailed Course Outline

Section 1: Course Introduction

Section 2: Introduction to SUSE Rancher Prime

- Introduction to SUSE Rancher
- SUSE Rancher Packaging
- Rancher Architecture

Section 3: Deploying SUSE Rancher Prime

- Requirements for SUSE Rancher Prime Deployment
- SUSE Rancher Prime Deployment for Testing
- Other SUSE Rancher Deployment Methods

Section 4: SUSE Rancher Prime User Interface

- Accessing the SUSE Rancher Prime User Interface
- Navigating within the SUSE Rancher Prime User Interface

- SUSE Rancher Prime User Interface Branding

Section 5: Downstream Cluster Management

- Node and Cluster Agents
- Importing an Existing Kubernetes Cluster
- Provisioning a Cluster on Existing Nodes
- Node and Cluster Drivers
- Cluster Provisioning to the Cloud
- Cluster API

Section 6: User Authentication and Authorization

- User and Group Management
- Controlling Authorization with Roles

Section 7: Application Management

- Projects and Namespaces
- Workload Deployment
- Application Management with Helm
- SUSE Application Collection
- Quotas

Section 8: Continuous Delivery with SUSE Rancher Prime

- Project Fleet
- Continuous Delivery

Section 9: Monitoring and Logging

- Monitoring a Downstream Cluster
- Logging on a Downstream Cluster
- External Log Output
- Introduction to SUSE Observability

Section 10: SUSE Rancher Prime UI Extensions

- Introduction to Extensions
- Managing Extensions

Section 11: Security with SUSE Rancher Prime

- Security Scanning
- Securing Clusters with SUSE Admission Policy Manager
- Container Security and Vulnerability Scanning with SUSE Security

Section 12: Command Line Access with SUSE Rancher Prime

- Command-Line Access to Rancher and Downstream Clusters
- Using kubectl for Rancher-Managed Downstream Clusters
- Rancher API

Section 13: Backup and Restore with SUSE Rancher Prime

- Backups in Rancher Environments
- Downstream Cluster Snapshots
- Upgrading Downstream Clusters
- Restoring Downstream Clusters
- Backing up and Restoring SUSE Rancher Prime
- SUSE Rancher Prime Migration

Section 14: Upgrading SUSE Rancher Prime