Training: SUSE
KUB211 Rancher Kubernetes Engine Deployment

TRAINING GOALS:

This course covers the deployment of Rancher Kubernetes Engine 2 (RKE2). You will start by learning the basics of installing RKE2, and then progress to installing a highly available RKE2 cluster. Next, you will delve into installing additional clusters with different configurations, Including custom Kubernetes Addons as an auto deployed service, advanced networking such as the Multus CNI plugin, and CIS hardening. Additionally, you will learn how to install a cluster in an air-gapped environment. After performing the different cluster installations, you will backup and restore an RKE2 cluster. Finally, you will learn how to upgrade both standard and air-gapped RKE2 clusters.

This course will help prepare for the SCDS in Rancher Kubernetes Engine 2 exam.

Key Objectives

Attendees will be taught the following concepts and skills:

- Deployment of RKE2 clusters, both standard highly available clusters and those with custom K8s addons, advanced networking and with CIS hardening
- Deployment of RKE2 clusters in an air-gapped environment
- Backing up and restoring RKE2 clusters
- Upgrading RKE2 clusters

Audience

This course is designed for system administrators and others that are interested in deploying RKE2 clusters.

CONSPECT:

- Section 1: Course Overview
- Section 2: Overview of the RKE2 Deployment Process
  - Introduction to RKE2
  - Requirements for RKE2 Deployment

Compendium Centrum Edukacyjne Spółka z o.o.
ul. Tatarska 5, 30-103 Kraków, tel.: (12) 298 47 77
ul. Postępu 18B, 02-676 Warszawa, tel.: (22) 417 41 70
BNP Paribas Bank Polska S.A.
EUR: PL 79 1600 1462 1853 6451 3000 0006
USD: PL 52 1600 1462 1853 6451 3000 0007

- RKE2 Architecture and Design Concepts
- Section 3: Install RKE2 Clusters
  - Overview of RKE2 Installation Methods
  - Overview of RKE2 Manual Installation
  - Overview of RKE2 Installation with the Installer Script
  - Overview of the RKE2 Configuration Options
  - Multi-node and Highly Available RKE2 Clusters
  - Install RKE2
- Section 4: Install RKE2 Clusters with Auto Deployed Services
  - Understand Kubernetes Addons
  - Understand Helm Integration in RKE2
  - Configure Deployment of Addons During the RKE2 Cluster Install
- Section 5: Install RKE2 Clusters with Advanced Networking
  - Understand Cluster Networking Options in RKE2
  - Configure Cluster Networking in RKE2
  - Configure RKE2 to Provide Multiple Network Interfaces to Pods
- Section 6: Install CIS Hardened RKE2 Clusters
  - Understand the CIS Benchmark and Cluster Hardening
  - Install RKE2 with Hardening for the CIS Benchmark
- Section 7: Install Air-gapped RKE2 Clusters
  - Understand Air-gapped RKE2 Cluster Installation Concepts
  - Install RKE2 in an Air-gapped Environment
- Section 8: Overview of etcd and RKE2 Backup and Recovery
  - Overview of etcd
  - Understand Basic etcd Concepts
  - Understand RKE2 Backup and Recovery Concepts
  - Back Up an RKE2 Cluster
  - Restore an RKE2 Cluster
- Section 9: Upgrade RKE2 Clusters
  - Overview of the RKE2 Cluster Upgrade Process
  - Upgrade RKE2 Clusters
  - Upgrade RKE2 Clusters in an Air-gapped Environment

REQUIREMENTS:

Attendees should have experience with Kubernetes administration and experience with SUSE Linux

Compendium Centrum Edukacyjne Spółka z o.o.
ul. Tatarska 5, 30-103 Kraków, tel.: (12) 298 47 77
ul. Postępu 18B, 02-676 Warszawa, tel.: (22) 417 41 70

BNP Paribas Bank Polska S.A.
EUR: PL 79 1600 1462 1853 6451 3000 0006
USD: PL 52 1600 1462 1853 6451 3000 0007

Enterprise deployment and administration.

Difficulty level



CERTIFICATE:

The participants will obtain certificates signed by SUSE.

TRAINER:

Certified SUSE Trainer

Compendium Centrum Edukacyjne Spółka z o.o.
ul. Tatarska 5, 30-103 Kraków, tel.: (12) 298 47 77
ul. Postępu 18B, 02-676 Warszawa, tel.: (22) 417 41 70
BNP Paribas Bank Polska S.A.
EUR: PL 79 1600 1462 1853 6451 3000 0006
USD: PL 52 1600 1462 1853 6451 3000 0007