Training: Component Soft

CEPH-151 Kubernetes Storage Administration with Ceph and Rook

TRAINING GOALS:

CEPH is an open-source distributed and fault tolerant storage system widely used in cloud environments. It can fulfill the storage needs of a Kubernetes environment. Rook is an open source storage manager that allows the integration of Ceph into Kubernetes and helps with the management of the storage cluster.

Participants of this training will learn about the main concept and architecture of Ceph, its installation and daily operation as well as using it in Kubernetes environments.

Besides in-depth theoretical coverage students also do hands-on exercises in their own Kubernetes + CEPH lab system.

Structure: 50% theory 50% hands on lab exercises.

Target audience: System administrators, developers and Devops who want to understand and use Ceph in Kubernetes environments.

CONSPECT:

- Module 1: Introduction
  - Storage Introduction
  - Ceph introduction
  - Ceph node types
  - Ceph architecture
  - Cluster maps
  - Object placement
  - Ceph installation
  - Ceph installation
  - Lab 1
- Module 2: Managing the Ceph cluster
  - Monitoring the Ceph cluster
  - Managing pools

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- Configuring Ceph
- Add cache tiering
- Cache tiering
- Adding and removing OSDs
- Best practices
- Lab 2

- Module 3: Working with Ceph
  - Ceph Block Device
  - Working with the Ceph Block Device
  - Working with RBD snapshots
  - Ceph object gateway
  - Ceph File system
  - Lab 3
- Module 4: Managing Ceph with Rook
  - Rook Architecture
  - Installation
  - Using Ceph in Kubernetes
  - Dynamic storage provisioning using ceph and Rook
  - Operating Ceph with Rook
  - Lab 4

REQUIREMENTS:

Linux container (e.g. Docker) and Kubernetes admin. skills, for instance by participating on our Docker and Kubernetes administration courses.

Difficulty level

CERTIFICATE:

The participants will obtain certificates signed by Component Soft (course completion).

TRAINER:

Certified Component Soft Trainer.

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