

Kubernetes: Solution use

Duration: 2 days

Audience: Professionnel TI

Who is this training for?

Developers, system administrators, and DevOps engineers requiring an introduction to Kubernetes.

Training objectives

- Deploy applications on a Kubernetes platform
- Use Kubernetes on a daily basis to manage your containers in production
- Develop the right reflexes in the event of a problem
- Deploy a clustered application

Summary

This training will allow you to deploy applications on a Kubernetes platform and use it on a daily basis to manage your containers in production. You will develop the right reflexes in the event of a problem and will know how to deploy a clustered application. The course covers the architecture of the Kubernetes project, its core objects (Pods, Services, Volumes) as well as internal objects (ReplicaSets, Deployments, StatefulSets, DaemonSets, Jobs). You will learn how to access the web interface, how to install and use Kubectl, and how to master troubleshooting techniques.

Course outline

Kubernetes Project Overview

- Architecture
- Overview
- Integration with Underlying Platforms

Kubernetes Objects

- Core Objects
- Pods
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Services

- Volumes

Internal Objects

- ReplicaSets
- Deployments
- StatefulSets
- DaemonSets
- Jobs

Getting Started

- Accessing the Web Interface
- Installing and Using Kubectl
- Deploying a Pod
- Creating a Deployment from a YAML File

Basic Usage

- Creating a Persistent Volume
- Creating a Deployment
- Exposing the Deploying through a Service
- Exposing a Service to the Outside
- Best Practices Advanced Uses
- Deploying a StateFul Application
- Scheduling a Job

Troubleshooting

- Accessing Container Logs
- Debug Techniques

Approach and methodology

- Have a basic knowledge of containerization (Docker)
- Know the principles of microservices architectures
- Be comfortable with Linux basics (command line)
- Have notions of networks and application deployments
- Understand the basic concepts of cloud computing (IaaS / PaaS)

Prerequisites

Linux system administration basics and knowledge of Docker or equivalent content.

Recommendations

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