

EKS Training - Kubernetes on AWS

Amazon Elastic containers

2 days (14 hours)

Presentation

[Amazon Elastic Container Service for Kubernetes](#) (Amazon EKS) is a managed service that lets you easily run Kubernetes on AWS without having to install and manage your own Kubernetes control plane.

Kubernetes is an open source system designed to automate the deployment, scaling and management of Docker container applications. Amazon EKS runs Kubernetes control plane instances across multiple availability zones, ensuring high availability.

Amazon EKS automatically detects and replaces faulty control plane instances. It provides automatic version upgrades and patches control plane instances.

Amazon EKS is also integrated with many AWS services, providing scalability and security for your applications, including :

- Elastic Load Balancing for load balancing
- IAM for authentication
- Amazon VPC for isolation

Amazon EKS runs up-to-date versions of the open-source Kubernetes software. This means you can use all the existing plug-ins and tools from the Kubernetes community. As with all our training courses, we'll be teaching you the latest stable version of the tool, [Kubernetes version 1.32](#).

Objectives

- Configuring and managing Kubernetes on Amazon EKS
- Deploying applications on elastic infrastructures
- Advanced monitoring of software services
- Simplify application software version upgrades

Target audience

Developers, Architects, System administrators, DevOps

Prerequisites

- Have attended our [Kubernetes](#) training course or have experience with it
- How to create and run Docker containers
- Basic knowledge of a Unix system

EKS training program

Introducing Amazon EKS

- Introduction to Amazon EKS
- How EKS works

Getting started

- Creating your Amazon EKS service role
- Creating the Amazon EKS cluster VPC
- Install and configure kubectl
- Download and install the latest AWS CLI

Clusters

- Cluster creation
- Deleting a cluster

Working nodes

- AMI optimized for Amazon EKS
- Launch of Amazon EKS work nodes

- Scaling

Storage classes

- Create a class
- Define a default storage class

Networking

- Cluster VPC considerations
- Cluster security group considerations
- Pod networking
- CNI upgrades
- Installing Calico on Amazon EKS

Cluster authentication management

- Configuring kubectl for Amazon EKS
- Creating a kubeconfig for Amazon EKS
- Manage users or IAM roles for your cluster

IAM strategies, roles and authorizations

- Strategy structure
- Creating IAM strategies
- IAM role of the Amazon EKS service

Troubleshooting & Maintenance

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning on entry to training complies with Qualiopi quality criteria. As soon as registration is confirmed, the learner receives a self-assessment questionnaire which enables us to

assess their estimated level of proficiency in different types of technology, and their expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.