

Updated on 22/11/2024

Sign up

Kyverno Training

3 days (21 hours)

Presentation

Kyverno is an open-source technology dedicated to policy-as-code management for Kubernetes. It enables enterprises and engineers to understand and facilitate their security, automate compliance, and provide secure self-service for application teams.

This course covers key Kyverno features, such as installing and configuring the tool for Kubernetes, Kyverno policies and rules with the use of YAML. We'll cover best practices for deploying Kyverno securely, leveraging Helm to simplify the installation process.

You'll learn how to integrate Kyverno with other tools via the API, react to unexpected situations and use alerts to better manage security and the Kyverno tool.

By the end of the course, you'll have mastered analysis and tracing in Kubernetes, advanced use of Kyverno to optimize security and integration of workflow tools.

Our training will be based on the latest version of the technology: [Kyverno v 1.13](#)

Objectives

- Master the fundamentals of Kyverno to secure your Policy-as-Code environment
- Install and configure Kyverno with Kubernetes following security best practices
- Integrate YAML and use Grafana to trace different applications
- Configuring Kyverno with teams for greater fluidity

Target audience

- DevOps teams
- Infrastructure managers
- Safety engineer
- Developers

Prerequisites

- Basic knowledge of Kubernetes and cluster management
- Familiarity with YAML
- Workflow system configuration skills
- Access to a Kubernetes environment to install and configure Kyverno

KYVERNO TRAINING PROGRAM

INTRODUCTION TO KYVERNO

- Introduction to Kyverno
- Overview of key features and benefits
- Understanding the real use of Kyverno in the Kubernetes cluster
- Exploring Kyverno's components
- Discussion of technical and infrastructure requirements

INSTALLATION AND CONFIGURATION

- Detailed steps for installing Kyverno
- Initial configuration and integration with Kubernetes
- Using Helm to simplify Kyverno deployment
- Setting up the Kyverno development environment
- Good safety practices during installation and configuration

KYVERNO POLICIES AND RULES

- Configuring Kyverno in Kubernetes cluster
- Overview of Kyverno rules for Kubernetes cluster
- Understanding the key metrics provided by Kyverno
- Using Kyverno CLI and YAML
- Integrating Kyverno into workflows

USING THE Kyverno INTERFACE

- Navigating the Kyverno user interface
- Understanding the different interfaces and visualizations available
- working with Assertion Trees
- Kyverno CLI and YAML use case analysis

- Alert and notification management

CONFIGURING SAFETY PROCESSES

- Configuring Kyverno with Cosign
- kyverno control and verification
- Kyverno signature repository configuration
- SBOM recovery for Kyverno

TROUBLESHOOTING AND RECOVERY

- Identifying symptoms
- Understanding and highlighting causes
- Problem-solving with the right solution

INTEGRATIONS AND API USE

- Exploration of possible integrations with Kyverno (Webhook, other tools)
- Understanding and using Kyverno's API for custom developments
- Practical examples of using the API to extend functionality
- Automation of common tasks via API
- Security and API access management

DATA TRACKING AND ANALYSIS

- Methods for tracing application requests on Kyverno
- Tracking with Grafana Tempo and Jaeger
- Use of external data analysis tools

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 at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her 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) which 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, with 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.

Training organization registered under number 11 75 54743 75. This registration does not imply government approval.

Ambient IT 2015-2024. All rights reserved. Paris, France - Switzerland - Belgium - Luxembourg