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Learning Style: On Demand

Technology:

Difficulty: Beginner

Course Duration:

Kubernetes Security Essentials (LFS260)



About this Course:

This course exposes you to knowledge and skills needed to maintain security in dynamic, multi-project environments. This course addresses security concerns for cloud production environments and covers topics related to the security container supply chain, discussing topics from before a cluster has been configured through

deployment, and ongoing, as well as agile use, including where to find ongoing security and vulnerability information. The course includes hands-on labs to build and secure a Kubernetes cluster, as well as monitor and log security events.

Course Objectives:

The learning objectives of the Kubernetes Security Essentials (LFS260) course are to equip learners with the basics of Kubernetes security. Students will understand how to secure clusters and network communication, manage role-based access controls, securely manage secrets, and maintain compliance. The course will also cover container security and audit logging. By the end of the course, students will be able to safeguard their Kubernetes ecosystem and prove due diligence for applicable security threats. They will also have the knowledge needed to make security-focused decisions when creating and managing Kubernetes deployments.

Audience:

- IT professionals who are using or planning to use Kubernetes in their operations.
- Developers aiming to enhance their understanding of Kubernetes security.
- System Administrators seeking to increase their skills in Kubernetes security protocols.
- Security specialists who wish to expand their expertise into Kubernetes environments.
- DevOps team members who are responsible for ensuring security within a Kubernetes platform.

Prerequisites:

- Knowledge of Linux system administration
- Familiarity with Linux command-line tools
- Understanding of system architecture (security, networking, storage options)
- Basic awareness of Cloud-native concepts
- Prior experience with container technologies, especially Docker.
- Basic coding proficiency, preferably in Python, Go, or JavaScript
- Foundation knowledge of Kubernetes concepts.

Course Outline:

Chapter 1. Course Introduction

Chapter 2. Cloud Security Overview

Chapter 3. Preparing to Install

Chapter 4. Installing the Cluster

Chapter 5. Securing the kube-apiserver

Chapter 6. Networking

Chapter 7. Workload Considerations

Chapter 8. Issue Detection

Chapter 9. Domain Review