

Kubernetes Fundamentals (LFS258)

Modality: Self-Paced Learning

Duration: 35 Hours

About this course:

This course is designed to work with a wide range of Linux distributions, so you will be able to apply these concepts regardless of your distro.

Kubernetes is quickly becoming the de-facto standard to operate containerized applications at scale in the data-center. This course covers the fundamentals needed to understand Kubernetes and get quickly up-to-speed, to start building distributed applications that will scale, be fault-tolerant and simple to manage. From understanding its origin, to its high-level architecture, powerful API and key primitives, this course takes you from nothing to being in a position to start building complex applications.

Kubernetes builds on 15 years of Google's experience managing containerized applications. With a growing open-source community, it is poised to change the way we build and manage applications, as well as change the role of system administrators. This self-paced course will distill key principles, such as pods, deployments, replicaset, and services, and will give you enough information so that you can start using Kubernetes on your own. This course will teach you how to use the container management platform used by companies like Google to manage their application infrastructure.

The average salary for Kubernetes Engineer is **\$122,444** per year.

Objectives:

You'll learn:

- Kubernetes architecture
- Deployment
- To get into the cluster
- Secrets and ConfigMaps

And much more!

Audience:

- Programmers and system administrators who want to get started with Kubernetes.

Prerequisites:

- To get the most from the Program, you should have fundamental Linux command line skills and some understanding of Linux containers (e.g. Docker).
- **Materials:** 1-year labs.

This Program is:

- 100% online and self-paced
- Designed to help you begin designing/architecting Application orchestration solutions and understand how they are going to work with Docker images

Course Outline:

Chapter 1. Course Introduction

Chapter 2. Basics of Kubernetes

Chapter 3. Installation and Configuration

Chapter 4. Kubernetes Architecture

Chapter 5. APIs and Access

Chapter 6. API Objects

Chapter 7. Managing State with Deployments

Chapter 8. Volumes and Data

Chapter 9. Services

Chapter 10. Helm

Chapter 11. Ingress

Chapter 12. Scheduling

Chapter 13. Logging and Troubleshooting

Chapter 14. Custom Resource Definitions

Chapter 15. Security

Chapter 16. High Availability

Chapter 17. Exam Domain Review