

# **LFS241 - Monitoring Systems and Services with Prometheus**

**Modality: On Demand**

**Duration: 25 Hours**

## ***About this course:***

Prometheus is a monitoring system and time series database. It is largely appropriate for regulating dynamic cloud environments. Having a strong data model and query language along with integrated alerting and service discovery support, Prometheus provides you with the opportunity of attaining a deep understanding of your systems and services, and define more accurate and relevant alerts.

This course has been designed to teach on the topic of Prometheus. This course has been designed in such a way that fresh Prometheus users are given the opportunity of traversing through many of its new features, best practices, and use cases. The course takers should be having basic knowledge and experience of Linux/Unix system administration, along with development knowledge and experience in Go and/or Python.

On average, a Linux System Administrator earns \$70,057 per annum.

## ***Learning Objectives:***

The course has the following learning objectives:

- Learning about Prometheus architecture
- Establishing and using Prometheus
- Regulating key system components and services
- Learning basic and advanced querying
- Designing dashboards
- Equipping instrumenting services and writing third-party integrations
- Alerting
- Making use of Prometheus alongside Kubernetes
- Learning advanced operational aspects

## ***Audience:***

This course has been designed for Linux administrators and app developers.

## ***Requirements:***

In order to reap the benefits of this course, you should be having foundational experience in Linux/Unix system administration. You should have some knowledge of common shell commands, such as ls, cd, curl, etc. Additionally, you must be having some amount of know-how and/or development experience in Go and Python. You should also have some experience of Kubernetes.

## Course Outline:

- Chapter 1. Course Introduction
- Chapter 2. Introduction to Systems and Service Monitoring
- Chapter 3. Introduction to Prometheus
- Chapter 4. Installing and Setting Up Prometheus
- Chapter 5. Basic Querying
- Chapter 6. Dashboarding
- Chapter 7. Monitoring Host Metrics
- Chapter 8. Monitoring Container Metrics
- Chapter 9. Instrumenting Code
- Chapter 10. Building Exporters
- Chapter 11. Advanced Querying
- Chapter 12. Relabeling
- Chapter 13. Service Discovery
- Chapter 14. Blackbox Monitoring
- Chapter 15. Pushing Data
- Chapter 16. Alerting
- Chapter 17. Making Prometheus Highly Available
- Chapter 18. Recording Rules
- Chapter 19. Scaling Prometheus Deployments
- Chapter 20. Prometheus and Kubernetes
- Chapter 21. Local Storage
- Chapter 22. Remote Storage Integrations
- Chapter 23. Transitioning From and Integrating with Other Monitoring Systems
- Chapter 24. Monitoring and Debugging Prometheus