

DevOps Engineering Foundation (DOEF)SM

Certification eLearning Course Description

It is designed from an engineering point of view and covers topics such as DevOps in relation to other frameworks, technologies, application design practices, continuous integration practices, continuous delivery and deployment, continuous testing, elastic infrastructures, monitoring, metrics, observability, governance, human aspects, and future trends of DevOps engineering.

DURATION: Approximately 5-6 hours

ACCESS: Learners will have 90 days access to the online course

OVERVIEW

DevOps is a complex maze that has many leaders frustrated. Many enterprises struggle with their DevOps journey, or even knowing where to start. There are many layers of people, process and technologies across each organization that are instrumental to engineering a successful DevOps solution. DevOps is not something you go get a quote for and simply buy. It's an evolving journey.

This course explains the many aspects of DevOps engineering that leaders and practitioners can execute upon. While DevOps Foundation provides an overview of DevOps, this course will provide a closer look at the implementation process from an engineering perspective. It is an in-depth view of the major aspects of engineering DevOps. An engineering approach is critical to DevOps journeys. This course provides the foundations of knowledge, principles and practices from a technical perspective needed to engineer a successful DevOps solution.

This course positions learners to successfully complete the DevOps Engineering Foundation exam.

COURSE OBJECTIVES

At the end of the course, the following learning objectives are expected to be achieved:

1. How to Engineer DevOps Solutions
2. DevOps Technologies
3. Applications Architecture
4. Continuous Integration
5. Continuous Testing
6. Ephemeral Elastic Infrastructures
7. Continuous Delivery and Deployment
8. Metrics, Monitoring, Observability and Governance
9. DevOps Humans
10. Future Trends

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AUDIENCE

The target audience for the DevOps Engineering Foundation course are individuals involved in engineering and technical practices such as:

- DevOps Practice owners and process designers
- Developers, QA engineers and Managers who are interested in understanding how DevOps works.
- Employees and managers responsible for engineering or improving processes.
- Consultants guiding their clients through process improvement and DevOps initiatives.
- Anyone responsible for:
 - Managing process-related requirements
 - Ensuring the efficiency and effectiveness of processes
 - Maximizing the value of processes

LEARNER MATERIALS

- Approximately 5-6 hours of learning videos
- Sample exams
- DevOps Glossary
- Access to additional value-added resources and communities

PREREQUISITES

- Some familiarity with DevOps processes and Agile is recommended

CERTIFICATION EXAM

Successfully passing (65%) the 90-minute examination, consisting of 40 multiple-choice questions, leads to the DevOps Engineering Foundation Certificate. The certification is governed and maintained by the DevOps Institute.

COURSE OUTLINE

- **Course Introduction (7 min)**
 - Course Goals
 - Course Agenda
- **Module 1: DevOps Engineering Introduction (45 min)**
 - DevOps Foundations
 - Principles and Practices
 - Related Frameworks
 - Performance and Benefits

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- **Module 2: DevOps Technology (49 min)**
 - Source and Artifacts Control
 - CI/CD Pipelines
 - Tools and Toolchains
 - Application Release Automation
 - Value Stream Management
- **Module 3: Applications Architecture and Continuous Integration (55 min)**
 - Application Architectures
 - Containers
 - Continuous Integration
- **Module 4: Continuous Testing (23 min)**
 - CT Tenets
 - Test Creation & TDD
 - Test Acceleration
 - Test Results
 - Test Management
 - Test Environment Management
- **Module 5: Ephemeral Elastic Infrastructure (43 min)**
 - Virtual and Cloud
 - Configuration Management
 - Infra-as-code
 - Containers Orchestration
 - GitOps
- **Module 6: Continuous Delivery and Deployment (25-min)**
 - Continuous Delivery and Deployment
 - Release Automation
 - Deployment Strategies
- **Module 7: Metrics, Monitoring, Observability, Governance (50 min)**
 - DevOps Metrics
 - Monitoring
 - Observability
 - Governance
- **Module 8: DevOps Engineering Humans (12 min)**
 - Culture
 - Team Topologies
 - Continuous Learning
 - Future DevOps Trends
- Additional Sources of Information
- Exam Preparation Materials
 - Exam Requirements, Question Weighting, and Terminology List
 - Sample Exam Review