

DevOps Fundamentals

DASA

DEVOPS AGILE
SKILLS ASSOCIATION

Duration: 3 days

COURSE DESCRIPTION

Up to 200 times faster software deployment, 30 times increased deployment frequency, and 60 times higher change success rates. The data doesn't lie. Organizations such as Netflix, Spotify and Facebook are transforming IT by successfully implementing DevOps principles. But you don't have to be a hot internet company or a gigantic enterprise to be a DevOps leader. Companies large and small, young and old, have magnificently made the transition and have the proof of success in their pockets.

DevOps training is the starting point for an organization going on the DevOps journey. Improved workflows and faster deployment starts with a core understanding of DevOps fundamental concepts by anyone involved in an agile and/or DevOps team. The 3-day DevOps Fundamentals course provides an extensive introduction to the core Agile DevOps principles covering the essential knowledge and skill competences that have been defined by the DevOps Agile Skills Association (DASA). This course is designed to provide the core education necessary to build your DevOps vocabulary and to understand its principles and practices. With the help of key DevOps concepts and terminology, real-life case studies, examples and interactive group discussions and extensive exercises in each module you will acquire a fundamental understanding of DevOps.

COURSE OBJECTIVES

After completing this course, students will be able to:

- Know the emergence of DevOps
- Know the core concepts and principles of DevOps
- Know what DevOps means for you as professional and for your organization
- Know the essence of a DevOps culture
- Understand the key elements of a DevOps culture
- Know the important aspects when creating a DevOps culture
- Know the Operational models of DevOps
- Understand the need for autonomous teams
- Understand the impact of DevOps on Architecture with respect to deployment
- Understand governance within DevOps teams
- Understand Agile, Scrum and Kanban and how these practices relate to one another
- Understand how ITSM processes relate to practices in a DevOps culture
- Understand how lean is used to optimize processes
- Know how to provide a Value Stream Map for a given process
- Understand the way to harvest new and innovative ideas
- Know the impact of automation on Software Delivery processes
- Understand the benefits and core principles of Continuous Delivery
- Describe the key cloud principles for DevOps organizations
- Know the relevance of monitoring and logging DevOps

COURSE OUTLINE

Module 1: Course Introduction

- Let's Get to Know Each Other
- Overview
- Course Objectives
- Mapping of the Competence Model with the Course Modules
- Course Agenda
- Type of Activities
- Exam
- Course Book
- Technical Glossary
- Group Activity
- Module Summary

Module 2: DevOps Introduction

- Module Objectives
- Module Topics
- Emergence of DevOps
- Core Concepts of DevOps
- DevOps Agile Skills Association (DASA)
- Module Summary
- Module End Questions

Module 3: Culture Ensuring Data Integrity through Constraints

- Module Objectives
- Module Topics
- Essence of a DevOps Culture
- Key Elements of DevOps
- Implementation of a DevOps Culture
- Module Summary
- Module End Questions

Module 4: Organization

- Module Objectives
- Module Topics
- Organizational Model
- Autonomous Teams
- Architecting for DevOps
- Governance
- Module Summary
- Module End Questions

Module 5: Processes

- Module Objectives
- Module Topics
- Process Basics
- DevOps in Relation to ITSM
- Agile and Scrum
- 12 Principles of the Agile Manifesto
- Optimizing Processes Using Lean
- Business Value Optimization and Business Analysis Using Story Mapping
- Module Summary
- Module End Questions

Module 6: Automation

- Module Objectives
- 6A Automation Concepts
- Automation for Delivery of Software
- Continuous Delivery Core Concepts
- Continuous Delivery Automation Concepts
- Continuous Delivery Automation Focus Topics
- 6B Data Center Automation
- Emergence of Cloud Technology and Principles
- Cloud Services Concepts in a DevOps Organization
- Automated Provisioning Concepts
- Platform Product Characteristics and Application Maturity
- Module Summary
- Module End Questions

Module 7: Measure and Improvement

- Module Objectives
- Module Topics
- Importance of Measurement
- Choosing the Right Metrics
- Monitoring and Logging
- Module Summary
- Module End Questions

PREREQUISITES

Basic familiarity with Agile, Scrum, Lean, and ITSM principles is beneficial.

WHO SHOULD ATTEND

- Individuals involved in IT development, IT operations or IT service management
- Individuals whose role is touched by DevOps and continuous delivery, such as the following IT roles:
 - DevOps engineers
 - Product owners
 - Integration specialists
 - Operations managers
 - Incident & change managers
 - System administrators
 - Network administrators
 - Business managers
 - Automation architects
 - Enterprise architects
 - Tester

EXAM DESCRIPTION

Exam Facts

Delivery	Paper-based
Format	Closed-book format, participants can bring scratch paper
Duration	60 minutes, 15-minute additional time for non-native candidates
# of questions	40, simple multiple choice (1 mark per question)
Pass Grade	65%