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DevOps Foundation®

VERSION 3

Global Best Practice

For organizations and professionals aiming to build collaboration, speed, and value with DevOps!

Course Description

PeopleCert

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DevOps Foundation® Course Description

Overview

As organizations face new entrants in their respective markets, they must stay competitive and release new and updated products regularly rather than once or two times a year.

DEVOPS INSTITUTE®: DevOps Foundation® is a freestanding certification from PeopleCert. The purpose of the certification and its associated course is to impart, test and validate knowledge of DevOps basic vocabulary, principles and practices. The vocabulary terms, concepts and practices are documented in the course learner materials. DevOps Foundation® is intended to provide individuals with an understanding of basic DevOps concepts and how DevOps may be used to improve communication, collaboration and integration between software developers and IT operations professionals.

The course includes the latest thinking, principles, and practices from the DevOps community including real-world case studies from high performing organizations including **ING Bank, Ticketmaster, Capital One, Alaska Air, Target, Fannie Mae, Societe Generale,** and **Disney** that engage and inspire learners, leveraging multimedia and interactive exercises that bring the learning experience to life, including the Three Ways as highlighted in the Phoenix Project by Gene Kim and the latest from the State of DevOps and DEVOPS INSTITUTE® Upskilling reports.

Learners will understand DevOps, the cultural and professional movement that stresses communication, collaboration, integration, and automation to improve the flow of work between software developers and IT operations professionals.

The course is designed for a broad audience, enabling those on the business side to understand microservices and containers. Those on the technical side will obtain an understanding as to the business value of DevOps to reduce cost (15-25% overall IT cost reduction) with increased quality (50-70% reduction in change failure rate) and agility (up to 90% reduction in provision and deployment time) to support business objectives in support of digital transformation initiatives.

Unique and exciting exercises will be used to apply the concepts covered in the course and sample documents, templates, tools, and techniques will be provided to use after the class.

This certification positions learners to successfully complete the DevOps Foundation® examination.

Course objectives

The **learning objectives** for DevOps Foundation® include an **understanding** of:

- DevOps objectives and vocabulary
- Benefits to the business and IT
- Principles and practices including Continuous Integration, Continuous Delivery, testing, security and the Three Ways
- DevOps relationship to Agile, AIOps, Generative AI, Lean, ITSM, VSM, SRE and Platform Engineering
- Improved workflows, communication and feedback loops
- Automation practices including deployment pipelines and DevOps toolchains, AIOps and Generative AI use cases
- Scaling DevOps for large organizations
- Critical success factors and key performance indicators
- AI Use cases
- Real-life examples and results

Audience

The target audience for the DevOps Foundation® course includes Management, Operations, Developers, QA, and Security professionals, such as:

- Individuals involved in IT development, IT operations or IT service management
- Individuals who require an understanding of DevOps principles
- IT professionals working within, or about to enter, an Agile Service Design Environment
- The following IT roles: Automation Architects, Application Developers, Business Analysts, Business Managers, Business Stakeholders, Change Agents, Consultants, DevOps Consultants, DevOps Engineers, Infrastructure Architects, Integration Specialists, IT Directors, IT Managers, IT Operations, IT Team Leaders, Lean Coaches, Network Administrators, Operations Managers, Project Managers, Release Engineers, Software Developers, Software Testers/QA, System Administrators, Systems Engineers, System Integrators, Tool Providers, Security Professionals

Official Training Materials (OTM) | Learner

- Learner Workbook (excellent post-class reference)
- Quick Reference Guide (QRG)
- Sample documents, templates, tools and techniques
- Access to additional value-added resources and communities

Prerequisites

Familiarity with IT terminology and IT related work experience are recommended.

Certification exam

Successfully passing (65%) the 60-minute examination, consisting of 40 multiple-choice questions, leads to the DevOps Foundation® Certificate. This DEVOPS INSTITUTE® certification is governed and maintained by PeopleCert.

Course outline

- **Module 1: Exploring DevOps**
  - Defining DevOps
  - Why Does DevOps Matter?
  - The Business Perspective
  - The IT Perspective
- **Module 2: Core DevOps Principles**
  - The Three Ways
  - The Theory of Constraints
  - Chaos Engineering
  - Learning Organizations
- **Module 3: Key DevOps Practices**
  - Continuous Testing, Integration, Delivery, Deployment
  - Site Reliability & Resilience Engineering
  - DevSecOps
  - ChatOps
  - Monitoring & Observability
  - Value Stream Management
  - Platform Engineering
- **Module 4: Business and Technology Frameworks**
  - Agile
  - ITSM
  - Lean
  - VSM
  - SRE
  - Safety Culture
  - Learning Organizations
  - Continuous Funding
- **Module 5: Culture, Behaviors & Operating Models**
  - Defining Culture
  - Cultural Debt
  - Behavioral Models
  - Organizational models
- **Module 6: Automation, Lean & Architecting DevOps Toolchains**
  - CI/CD
  - Infrastructure as Code
  - Cloud, Containers, and Microservices
  - Machine Learning
  - DevOps Toolchains
  - Value Stream Management Platforms
  - Platform Engineering
  - Generative AI Use Cases
- **Module 7: Measurement, Metrics, and Reporting**
  - The Importance of Measurement
  - DevOps Metrics - Speed, Quality, Stability, Culture
  - Change lead/cycle time
  - Value Flow Metrics
  - DevOps Dashboards
  - AIOps

- **Module 8: Sharing, Shadowing and Evolving**
  - DevOps Days
  - DevOps in the Enterprise
  - Roles
  - DevOps Leadership
  - Organizational Considerations
  - Getting Started
  - Challenges, Risks, and Critical Success Factors

DEVOPS INSTITUTE®

THE LANGUAGE OF COLLABORATION

ESG Commitment

PeopleCert has been accredited by Lloyd's Register, UK (now LRQA), in accordance with ISO 14001 for Environmental Management since 2006. Recognized through numerous awards, we remain committed to ESG leadership and the preservation of our planet.