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Continuous Testing Foundation℠

VERSION 1

Global Best Practice

For organizations and professionals aiming to improve quality, speed, and confidence through Continuous Testing!

Course Description

PeopleCert

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Continuous Testing Foundation℠ course description

Overview

The Continuous Testing Foundation℠ course introduces the concepts, principles, practices, and terminology required to implement Continuous Testing in modern DevOps environments. Participants learn how Continuous Testing supports the continuous assessment of software and system changes throughout the end-to-end delivery lifecycle.

The course explores Continuous Testing culture, roles, responsibilities, implementation strategies, testing frameworks and tools, test planning, test automation, and test management best practices. Through practical activities, discussions, and real-world examples, learners gain an understanding of how testing contributes to faster delivery, improved quality, reduced risk, and more effective collaboration across development, testing, and operations teams.

The course is built on industry-recognized DevOps and Continuous Testing practices and prepares learners to apply Continuous Testing concepts in their own organizations.

This certification positions learners to successfully complete the Continuous Testing Foundation℠ exam.

Course objectives

The **learning objectives** for Continuous Testing Foundation[SM] include a practical **understanding** of:

- the purpose and benefits of Continuous Testing
- the concepts, principles and terminology of Continuous Testing
- real-life scenarios through discussion and knowledge sharing.

Audience

The target audience for the Continuous Testing Foundation[SM] course are professionals including:

- testers and QA professionals
- test managers and test leads
- software developers and development team members
- DevOps engineers and practitioners
- release and deployment professionals
- automation engineers
- IT operations professionals
- Continuous Integration / Continuous Delivery practitioners
- product owners and agile team members
- anyone involved in software quality, testing, and delivery within a DevOps environment.

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
- Glossary of terms

Prerequisites

An understanding and knowledge of common DevOps terminology and concepts and related work experience are recommended.

Certification exam

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

Course outline

- **Introduction**
  - Course objectives
  - Course agenda
  - Purpose, principles and terminology of Continuous Testing
  - DevOps publications and additional resources
- **Module 1: Concepts, Terminology, and Benefits**
  - Concepts and terminology
  - Relationship between DevOps and Continuous Testing
  - Continuous Testing pipeline, environments and test types
  - Activity: DevOps testing types
  - Benefits of DevOps Testing
  - Business and team benefits of DevOps Testing
- **Module 2: Culture**
  - DevOps testing culture
  - Characteristics of a collaborative testing culture
  - Activity: Culture affects DevOps testing performance
  - Implementation strategies for DevOps testing culture
  - Leadership, organization, roles and responsibilities
  - Training, resources and cultural improvement
- **Module 3: Strategies**
  - DevOps testing compared with Waterfall, Agile and DPSM
  - DevOps testing implementation strategies
  - SHIFT LEFT, FAIL EARLY, FAIL OFTEN, TEST FAST and RELEVANCE
  - Test infrastructure, orchestration and automation
  - A/B, Blue-Green and Canary testing
  - Reliability, security, microservices and container testing
  - Test acceleration and monitoring, Chaos Monkey, disaster and recovery test strategy, and test coverage
- **Module 4: Frameworks and tools**
  - Purpose and components of DevOps testing frameworks
  - Framework integration and selection
  - Types and applications of DevOps test tools
  - Integration and selection of test tools

    - Activity 1: Pipeline test frameworks and test tools
    - Activity 2: Testing tools and their function
- **Module 5: DevOps test planning | Best practices**
    - Test strategy, planning and pipeline coverage
    - Test automation and creation strategies
    - Peer review and version management
    - Test-case design, documentation and maintenance
    - Test-suite development and review
    - Activity: Test case scoring
- **Module 6: Test automation | Best practices**
    - Automation tools and test topologies
    - Automated and non-automated testing goals
    - Regression-testing practices
    - Scripting, keyword-driven and capture-replay testing
    - Test-Driven, model-based and behaviour-based testing
    - Activity: Testing a three-tier e-commerce application
- **Module 7: Test management and analysis | Best practices**
    - Financial, program and resource management
    - Release-quality goals and readiness criteria
    - Test-results collection and analysis
    - Test remediation and collaboration
    - Test Management Database
    - Activity: E-commerce solution
- **Course recap**
    - Review of key course themes and practical takeaways
    - Resources for continued learning
    - Activity: Define a DevOps test strategy
- **Exam preparations**
    - Exam requirements, question weighting, and terminology list
    - Sample exam review

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