

Q31253 ICAgile Certified Professional - Foundation of DevOps [ICP_FDO]

Duration: 3 days live online or face-to-face

Course Overview

This 3 day instructor-led hands-on course provides an overview of the agile approach to DevOps and is one of ICAgile's most technical and hands-on Learning Tracks. Improved workflows and faster deployment start with an understanding of DevOps fundamentals by all team members. The Certification is designed to provide the education necessary to build your DevOps vocabulary and to understand its principles and practices. With the help of DevOps concepts and terminology, real life case examples, group discussions and extensive exercises you will acquire an understanding of DevOps.

This is the accredited ICAgile Foundation of DevOps course as provided by the International Consortium for Agile (ICAgile) but we also provide you with an online Amazon Web Service instance as your training environment during the course for the exercises.

Who should attend?

This course is aimed at a broad audience of technical and/or non-technical professionals whose role are touched by DevOps and continuous delivery.

Prerequisites & pre-reading guidelines

No specific prerequisites are necessary. However basic familiarity with Agile, Scrum, Lean, and DevOps principles is beneficial.

How certification is earned

Upon successful completion of this course, you will be awarded an "ICAgile Foundations of DevOps" certificate. To achieve this certification, you need to engage fully in collaborative learning activities, group discussions, and a final "Expleo Assessment".

Context

This course provides the foundation for anyone interested or started working in DevOps. Further ICAgile certifications are recommended.

Related courses

Attendees may also be subsequently interested in

- ISTQB® Certified Tester – Foundation Level
- ICAgile Certified Agile Fundamentals

Course Objectives

On completion of this training, attendees will be able to:

- Explain the origins of DevOps and the benefits an organization can gain from adopting DevOps.
- Contrast DevOps as a set of practices with DevOps as a mindset based on a set of principles and how to apply them in practice.
- Describe the cultural changes when adopting the DevOps culture.
- Demonstrate the scope of version control and how a single source of truth supports DevOps.
- Describe effective configuration management elements and techniques.
- Explain the principles and key practices of continuous integration, contrasting good/bad CI approaches.
- Explain how different aspects of quality assurance complement each other and identify risks involved in skimping on QA practices.
- Describe and differentiate both continuous delivery and continuous deployment, explaining how they relate to a DevOps culture.
- Explain the benefits of continuous delivery and how its principles improve software development.
- Describe and contrast continuous delivery practices, distinguishing from practices based on the context of their own environment.
- Describe an end-to-end deployment pipeline and explain the choices made for each stage.
- Illustrate how infrastructure choices impact the ability to effectively implement and scale DevOps.
- Show DevOps implications of DevOps on data and database management and explain the practices needed to ensure data integrity in a DevOps environment.

Course Outline

Introduction

- What is DevOps?
- Origins of DevOps
- DevOps Principles
- Systems Thinking
- Definition of Done
- The CALMS model

CALMS: Culture

- What is Culture?
- Build Quality in
- Done Means Released
- Everyone is Responsible for the Delivery Process
- Continuous Improvement

CALMS: Automation

- What is Automation?
- Why do we Automate?
- Automate Almost Everything

Development

- Development Approaches
- Configuration Management
- Version Control – Mainline
- Static Analysis
- Commit Stage

Testing

- Why do we test?
- What tests are good candidates for Automation
- Test Automation Strategies
- Types of Tests
- Testing within the automated development

Continuous Integration

- Keep everything in source control.
- Prioritise fixing the build
- Continuous feedback

Continuous Delivery

- Repeatable, Reliable Process for Releasing Software
- If it Hurts, Do it More Frequently, and Bring the Pain Forward
- Build Binaries Only Once
- Same Deploy Process Everywhere
- Smoke Test Your Deployment

Continuous Deployment

- Definition of Deployment Pipeline
- Manual testing
- Non-functional testing
- Pushing to production
- Deployment orchestration

CALMS: Lean

- Lean principles
- Muda Mura and Muri
- Seven Wastes of Lean
- Business Value
- Flow

Operations

- Managing Infrastructure
- Application configuration
- Third Party Components
- Managing Data Change
- Rolling back a release

CALMS: Measurement

- Lagging and Leading Indicators
- What are the key DevOps Metrics?
- Monitoring
- Continuity planning

CALMS: Sharing

- Sharing
- Essential conflict
- Teams
- T-shaped Profiles
- The Westrum organisational typology model
- Conway's law
- A Fearless Organisational structure
- Roles and Activities within DevOps
- Business System teams and the Platform team
- Distributed teams

Contact

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