

DevOps Overview (SE202)

8 Hours

Outline

What is the secret to the rapid success of software giants like Netflix, Amazon or Google?

How did they succeed in turning information technology from operational expense to strategic advantage?

The answer is new development and operation methodologies combined with advanced tools and organizational culture focused on innovation. Or in short DevOps.

Working according to the DevOps principles enables technology organizations to make changes at a much faster rate and with higher quality.

No wonder everyone wants DevOps. The labor market is hungry for professionals of a new type - which five years ago hardly anyone heard of. The job boards are filled with ads looking for DevOps engineers (Site Reliability Engineers or Build / Release engineers, etc.).

Many software vendors market their products and solutions as DevOps. There are various events dedicated to the industry such as DevOps Days and more.

However, the true meaning of DevOps remains vague. Many professionals have trouble understanding and explaining why this DevOps thing is good. The variety of skills, processes, and tools involved in doing "DevOps" changes every day and is redefined.

At the course we'll explain what DevOps is, understand the guiding principles of the methodology and understand what tools and skills you need to enjoy the benefits of the method.

Target Audience

Business managers and decision makers looking to benefit from digital transformation. Software development and operation professionals looking for ways to improve the way they deliver software.

Prerequisites

Good understanding of software development lifecycle. Acquaintance with management theory and practice. Basic understanding of Agile Software Development methodology.

Contents

DevOps: the IT Revolution

- The Birth of Agile Operations
- The Great Divide of Devs and Ops
- 10 Deployments a Day at Flickr
- Lean Principles and DevOps
- TQM and DevOps

Agile Project Management

Evolution of Version control and Release Management

- Centralized vs. Distributed
- Integrated Systems

Continuous Integration and Delivery

- Continuous Testing
- Continuous Deployment
- Continuous Security
- Continuous Metrics

A Few Words about the Cloud

- Advantages
- Challenges
- What is Cloud-Native?
- Models: IAAS, PAAS, SAAS
- Serverless Computing

Configuration Management Tools / Infrastructure as Code

Introduction to Microservice Architectures

Containers (docker)

The Organizational Structure

Continuous Learning

Where to Start