
CTR-500 DevOps

Overview

About This Course

Basic software knowledge

Audience Profile

For IT specialists, Full stack developers and automation engineers

At Course Completion

At the end of the course the student will master all main DevOps areas

Course outline

Introduction to DevOps:

- Overview of DevOps and its principles
- Understanding the need for DevOps in modern software development

Version Control with Git:

- Understanding Git and version control
- Creating and managing repositories
- Collaborating with others using Git

Continuous Integration and Deployment:

- Understanding CI/CD and its benefits
- Setting up CI/CD pipelines using tools such as Jenkins, TravisCI, or GitLab CI
- Automating build, test, and deployment processes

Infrastructure as Code:

- Understanding Infrastructure as Code (IaC) and its benefits
- Managing infrastructure using tools such as Terraform or CloudFormation
- Automating infrastructure provisioning and configuration management

Containerization:

- Understanding containers and container orchestration
- Setting up and managing containers using tools such as Docker or rkt
- Automating container deployment and scaling using Kubernetes or similar orchestration tools

Monitoring and Logging:

- Understanding the importance of monitoring and logging in DevOps
- Setting up monitoring and logging using tools such as Prometheus, Grafana, or ELK Stack
- Automating the collection and analysis of system and application logs

Security and Compliance:

- Understanding security and compliance in DevOps
- Implementing security measures such as encryption, authentication, and access control
- Ensuring compliance with security standards and regulations

Cloud Computing:

- Understanding cloud computing and its benefits
- Deploying applications on cloud platforms such as AWS, Azure, or Google Cloud Platform
- Automating cloud resource management and scaling

Project:

- Designing and implementing a complete DevOps pipeline for a real-world application