

DevOps Training

Course Title: DevOps Training

Duration: 16 hours (4 sessions)

Description:

This course provides a comprehensive introduction to DevOps principles, cloud computing, and modern infrastructure management. It covers essential topics such as Cloud-Native Applications, AWS services, containerization with Docker, and Kubernetes orchestration. Participants will explore practical tools like Terraform and Ansible for infrastructure as code, alongside observability and monitoring techniques crucial for maintaining modern software systems.

Course Highlights:

- Understanding DevOps principles and Cloud-Native architecture
- Introduction to AWS and its key services (EKS, Lambda, CloudFormation)
- Hands-on with Docker for app packaging (Node.js and .NET)
- Mastering Kubernetes for orchestration (Pods, Services, Networking)
- Implementing Infrastructure as Code using Terraform and Ansible
- Exploring observability tools, monitoring systems, and log collection techniques

Prerequisites:

- Basic understanding of software development and IT infrastructure
- Familiarity with command-line tools
- Knowledge of a programming language (e.g., Python, JavaScript, or .NET) is recommended

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Main syllabus subjects:

Theory of devops

Defining Cloud-Native
Cloud Native Applications
Cloud Native Infrastructure
The CNCF Landscape

Cloud Computing and AWS

An overview - how cloud computing has changed (and continues changing) software delivery.
Leading cloud infrastructure providers
Cloud infrastructure management tools overview

AWS

Introduction
Main services overview
Managing cloud resources with Web console
Managing cloud resources with cli
Cloud Formation
EKS
Lambda

Ansible Overview

Terraform

Introduction to Terraform
Language Components
Infrastructure as Code

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Main syllabus subjects:

Observability

Monitoring

Principles of modern monitoring
Leading monitoring systems overview
Cloud-based monitoring systems

Logging

Principles of modern log collection
Log collection systems (ELK/Logz.io)

Docker

How to package NodeJs apps
How to package .net apps

Kubernetes

Pods
Services
Networking