

**DevOps Boot Camp**

**Course Number:** DVOP-134  
**Duration:** 10 days

**Overview**

This two-week DevOps boot camp gives learners an in-depth understanding of DevOps practices, including continuous integration, deployment, automation, containerization, and cloud services. It also incorporates hands-on labs, shell scripting, and the option to work with AWS or Azure cloud platforms.

**Prerequisites**

Having some development, QA, or operations experience is recommended.

**Materials**

All DevOps training attendees receive comprehensive courseware

**Software Needed on Each Student PC**

Accelebrate can provide a remote lab environment for this class.  All attendees should have computers with Internet access and a modern web browser (ideally Chrome).

**Objectives**

* Design and implement a DevOps framework
* Utilize automation for reliable and scalable software delivery
* Implement continuous integration, delivery, and deployment pipelines
* Compare modern tools for cloud, containers, and CI/CD
* Automate infrastructure using Infrastructure as Code (IaC) tools on AWS or Azure
* Improve the reliability and efficiency of release management and monitoring processes
* Apply advanced automation strategies, including shell scripting
* Integrate security practices within DevOps (DevSecOps)

**Outline**

* What is DevOps?
  + Evolution of DevOps, Modern Practices
  + Key Components (CALMS Framework: Culture, Automation, Lean, Measurement, Sharing)
* DevOps Outcomes for Businesses
  + Aligning DevOps with Business Goals
  + Value Stream Mapping for Software Delivery
  + Introduction to AWS/Azure for DevOps
* Version Control with Git
  + GitFlow vs. Trunk-Based Development
  + Repository Management: GitHub, GitLab, Bitbucket
* Build & Release Strategies
  + Feature Flags, Rollbacks, and Deployment Pipelines
  + Hands-on Lab: Implementing Version Control and CI Pipelines with Git and Jenkins or GitHub Actions
* Introduction to Shell Scripting
  + Basic Shell Commands, Scripting for Automation
  + Error Handling and Logging in Scripts
  + Automating Infrastructure Tasks
* What is CI/CD?
  + CI/CD Pipeline Design and Tools
  + Integrating Automated Testing into Pipelines
* CI/CD Tools Overview
  + Jenkins, GitHub Actions, GitLab
* Introduction to Cloud Computing (AWS/Azure)
  + Evolution of Cloud from Virtualization to Containers
  + Introduction to AWS EC2, S3, Lambda / Azure Virtual Machines, Storage, and Functions
* Containerization with Docker
  + Container Basics, Dockerfile, and Image Management
* Conclusion