

**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