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HANDBOOK

DEVOPS ENGINEER CERTIFICATION COURSE



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DevOps Engineer Certification Course

"Transform Your Career – Master the Art of DevOps Engineering"

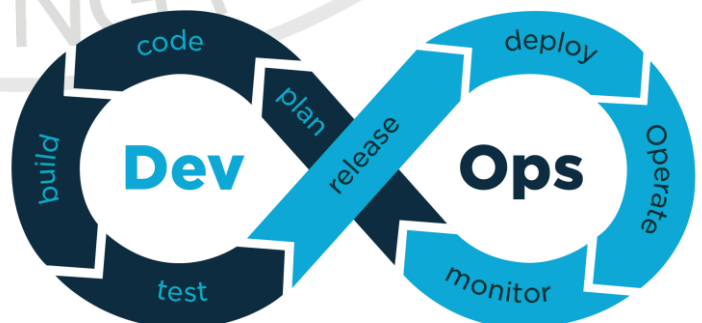
The **DevOps Engineer Certification Course** at **TECHELEARN** is designed for professionals who want to embrace the rapidly growing field of DevOps. With increasing demand for faster, more reliable software development and deployment, DevOps engineers play a crucial role in bridging the gap between development and operations. This course equips you with the essential skills and knowledge required to work in continuous integration, continuous delivery, and automated deployment pipelines.



Whether you're an aspiring DevOps professional or looking to enhance your existing skills, this training will help you gain the expertise needed to thrive in this fast-paced, technology-driven industry.

Why DevOps?

In today's competitive market, the DevOps methodology has become a game-changer, helping companies build and deliver software at an accelerated pace. The need for skilled **DevOps engineers** is higher than ever. By mastering DevOps tools and techniques, you will be positioned to transform your career and be at



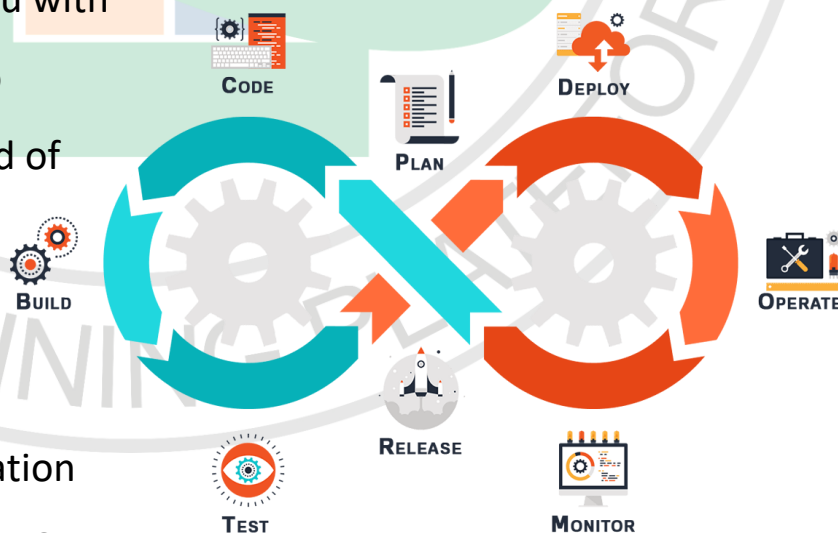
the forefront of technological innovation.

- **Industry Demand:** DevOps engineers are among the most sought-after professionals in the tech industry, with businesses striving for faster, more efficient deployment cycles.
- **Lucrative Career Path:** DevOps engineers command high salaries due to their specialized skill set, with opportunities to work in various sectors like cloud computing, IT operations, and software engineering.
- **Future-Proof Skills:** As more companies adopt DevOps, professionals trained in this discipline will continue to be essential in driving digital transformation and operational efficiency.



What Will You Learn?

Our **DevOps Engineer Certification Course** covers all critical areas of the DevOps lifecycle, providing you with practical, hands-on training to enhance your skills. By the end of the course, you will be equipped to design, build, and manage the infrastructure and automation tools that power successful DevOps pipelines.



Core Areas of Learning:

1. Introduction to DevOps and Culture:

- Understanding DevOps: Concepts, Tools, and Culture
- The Importance of Collaboration between Development and Operations Teams
- Agile, Lean, and ITIL frameworks in DevOps
- DevOps Principles and Practices: Continuous Integration, Continuous Delivery (CI/CD)



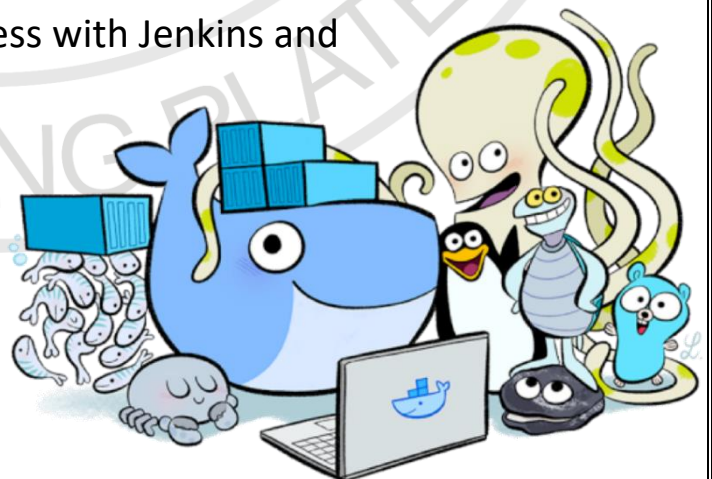
2. Version Control and Code Management:

- Working with Git: Version Control System Basics
- Branching, Merging, and Code Collaboration in GitHub, GitLab, and Bitbucket
- Best Practices for Code Repository Management

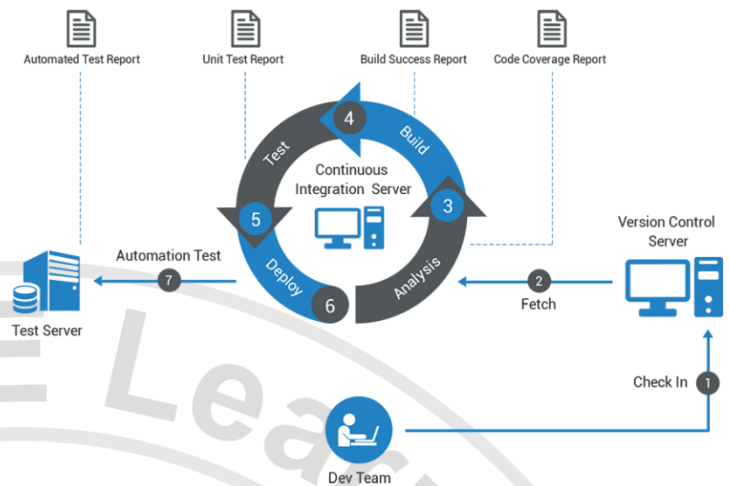
3. Continuous Integration (CI) and Continuous Deployment (CD):

- Setting up a Continuous Integration (CI) Pipeline
- Automating the Build Process with Jenkins and Bamboo
- CI/CD Pipeline

Implementation: From
Code Commit to
Deployment



- Automating Unit Tests, Static Code Analysis, and Integration Tests
- Containerization with Docker in CI/CD Pipelines

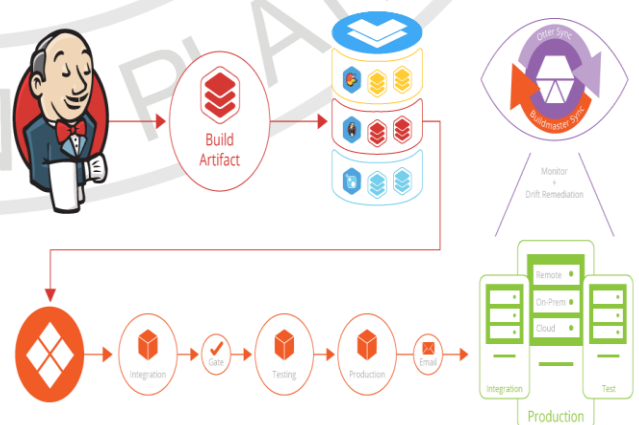


4. Infrastructure as Code (IaC):

- Introduction to Infrastructure Automation
- Working with Tools like Terraform, Ansible, Chef, and Puppet
- Automating Infrastructure Provisioning and Configuration Management
- Scaling Infrastructure using IaC for Cloud-based Applications (AWS, Azure, GCP)

5. Cloud Computing and Virtualization:

- Introduction to Cloud Platforms: AWS, Microsoft Azure, and Google Cloud
- Setting Up and Managing Virtual Machines, Containers, and Networks in the Cloud
- Containerization and Orchestration with Docker and Kubernetes
- Cloud-Native Application Design and Deployment



6. Monitoring, Logging, and Troubleshooting:

- Using Tools like Prometheus, Nagios, Grafana for Monitoring
- Centralized Logging with ELK Stack (Elasticsearch, Logstash, Kibana)
- Troubleshooting Deployment Issues and Managing Failures
- Scaling and High Availability in Distributed Systems



7. Security in DevOps:

- Integrating Security into DevOps Practices (DevSecOps)
- Automating Security Testing and Vulnerability Scanning
- Best Practices for Securing Containers, Cloud Infrastructure, and Pipelines

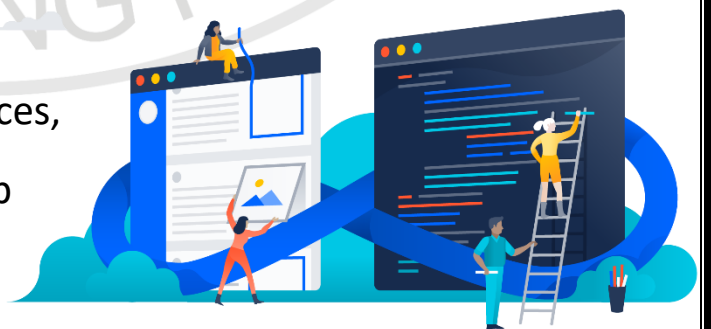
8. Advanced DevOps Topics:

- Microservices Architecture and DevOps
- Automating Deployment to Multiple Environments (Dev, QA, Staging, Production)
- Advanced Continuous Delivery Pipelines
- Managing Large-Scale, Distributed Applications

Course Highlights

- **Industry-Relevant**

Curriculum: Learn DevOps practices, tools, and techniques used by top organizations worldwide.



- **Hands-On Experience:** Engage in practical lab exercises and real-world case studies using tools like Jenkins, Git, Docker, Kubernetes, AWS, Terraform, and more.

- **Experienced Instructors:**

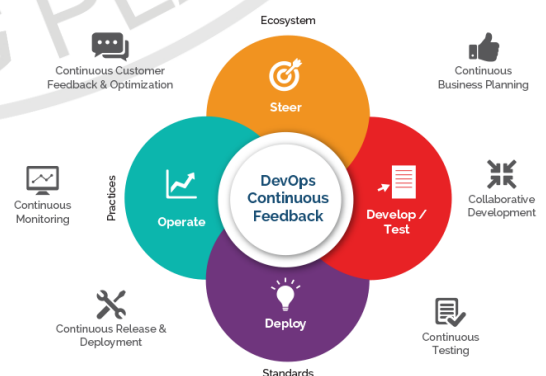
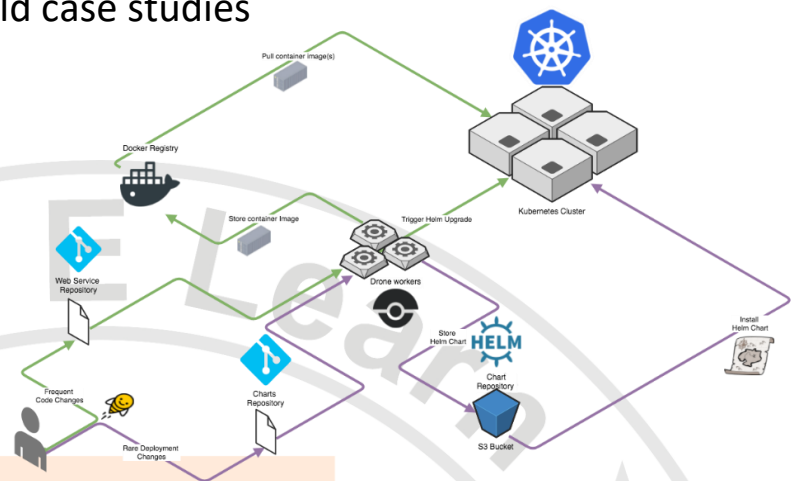
Learn from industry

professionals with extensive DevOps experience who will guide you through real-world scenarios and challenges.

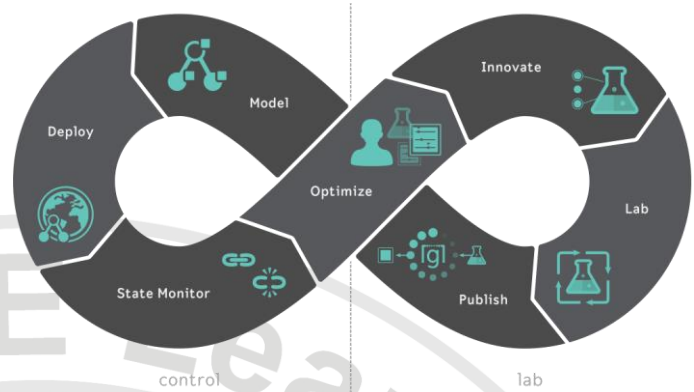
- **Job-Ready Skills:** Upon completion, you'll be prepared to take on roles like DevOps Engineer, Continuous Integration Specialist, and Infrastructure Automation Engineer.
- **Global Certification:** Gain a globally recognized certification that will enhance your employability and career prospects.
- **Flexible Learning:** Study at your own pace with our comprehensive online learning platform, available anytime, anywhere.
- **Career Assistance:** Get career support and job placement assistance to kickstart your DevOps career.

Course Modules

Our **DevOps Engineer Certification Course** is structured into modules that cover the essential DevOps lifecycle, from code management to continuous delivery. These



modules are designed to provide you with on training to implement and manage DevOps practices in a professional setting.



1. Module 1: Introduction to DevOps

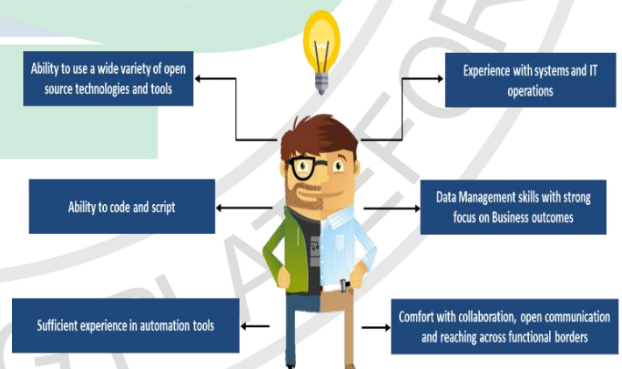
- What is DevOps?
- Key Concepts, Culture, and Benefits of DevOps
- DevOps in the Software Development Lifecycle
- The Role of Automation and Continuous Integration

2. Module 2: Version Control and Git

- Git Basics and Version Control Systems
- Git Commands, Branching, Merging
- Code Collaboration with GitHub and GitLab

3. Module 3: Continuous Integration and Continuous Deployment (CI/CD)

- Setting up Jenkins for CI/CD
- Automating Build and Test Pipelines
- Deploying to Staging and Production Environments



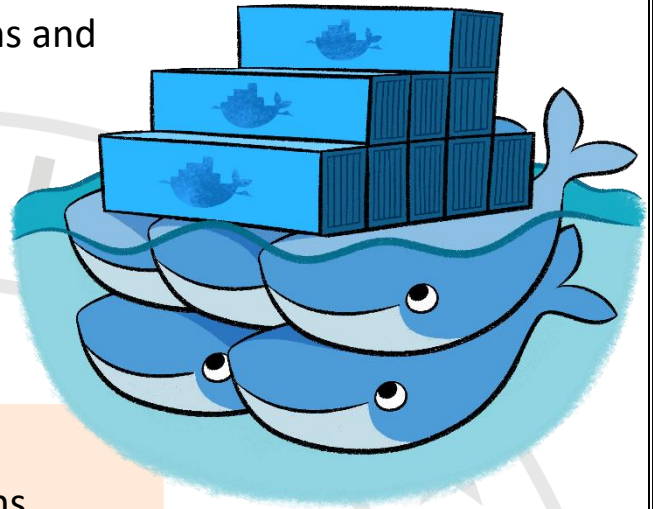
4. Module 4: Infrastructure Automation and IaC

- Terraform Basics: Infrastructure as Code
- Managing Cloud Resources with Ansible and Puppet

- Infrastructure Automation in Cloud (AWS, Azure, GCP)

5. Module 5: Cloud Computing and Containerization

- Introduction to Cloud Platforms and Cloud-Native Applications
- Containerization with Docker
- Orchestration with Kubernetes
- Building and Scaling Applications on Cloud Platforms



6. Module 6: Monitoring, Logging, and Troubleshooting

- Implementing Monitoring with Prometheus and Grafana
- Using ELK Stack for Centralized Logging
- Troubleshooting with DevOps Monitoring Tools

7. Module 7: DevSecOps – Integrating Security into DevOps

- Security Best Practices in DevOps
- Automating Security Testing with DevSecOps Tools
- Securing DevOps Pipelines and Cloud Infrastructure

Who Should Take This Course?

This course is ideal for anyone interested in building or advancing their career in DevOps. Whether you're an IT professional, developer, or system administrator, this course will



provide you with the essential tools and techniques to thrive as a DevOps Engineer.

- **Software Developers**

interested in automating deployment and improving application

- **System Administrators** seeking to manage infrastructure efficiently.
- **Cloud Engineers** looking to master DevOps practices for cloud-based environments.
- **IT Operations Professionals** wanting to automate their workflows and improve efficiency.
- **Experienced DevOps Professionals** looking to upgrade their knowledge with advanced topics.



Course Format





Format Detail	Description
Duration	3 Months Training + 1 Month Practice
Learning Approach	30% Theory + 70% Practical
Assessment	90-minute certification exam with 60 MCQs
Passing Score	70%
Certification Criteria	Successful project submission + exam pass

Why Choose TECHELEARN?


- **Real-World Training:** Learn the most widely used tools in the industry and gain hands-on experience working with cloud platforms, containerization tools, CI/CD pipelines, and more.
- **Expert-Led Courses:** Get trained by industry veterans who have real-world DevOps experience.
- **Comprehensive Learning Path:** From basic concepts to advanced DevOps practices, our training program covers all you need to know.
- **24/7 Access:** Learn at your own pace with our flexible online platform, anytime and anywhere.
- **Placement Assistance:** Get career counseling and job placement assistance to help you secure a position as a DevOps Engineer.



Training Modes

-  **Live Instructor-Led Online Training**
-  **Self-Paced Learning + Assignments**
-  **Corporate On-Demand Training Workshops**
-  **Hybrid Model for Flexibility & Impact**



 Includes: Source Code, Assignments, Quizzes, Final Capstone Project & Certificate Exam

Bonus Add-ons

- ✓ GitHub Portfolio Setup
- ✓ Resume & LinkedIn Optimization
- ✓ Interview Preparation Sessions
- ✓ Lifetime Access to Developer Community




Partner with TECHELEARN – Upskill Your Team

TECHELEARN offers customized DevOps Engineer training for businesses.

-  Talk to Our Enterprise Team
-  Request a Tailored Group Training Plan

Get Started DevOps Journey Today

Join **11,000+** learners who trust **TECHELEARN** for career-ready skills.

 DevOps skills are in high demand. Don't just learn—**Master it with TECHELEARN.**



-  **JOIN US IN THIS EXCITING JOURNEY!**



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