

Cloud Computing & DevOps

An industry-aligned course covering Cloud Computing (AWS/Azure/GCP), Linux Administration, Docker containerization, Kubernetes orchestration, CI/CD pipeline building, Infrastructure as Code (Terraform), and cloud security.

Duration 5 to 6 Months	Training Mode Offline Classroom Training	Certification Industry Certificate	Practical Labs 100% Hands-on
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Tools & Tech: Linux • Bash • Git • GitHub • GitHub Actions • Jenkins • Docker • Docker Compose • Kubernetes • AWS (EC2 • S3 • IAM • VPC • RDS • Lambda • CloudWatch) • Microsoft Azure • Google Cloud Platform (GCP) • Terraform • Ansible • Nginx • Prometheus • Grafana • ELK • Stack • SSL/TLS • REST APIs • ChatGPT • GitHub Copilot • AI-Assisted DevOps

Detailed Course Curriculum & Modules

MODULE 01 Introduction to Cloud Computing & DevOps - Cloud & DevOps Fundamentals - Introduction to Cloud Computing - Evolution of Cloud Computing - Cloud Service Models (IaaS, PaaS & SaaS) - Public, Private & Hybrid Cloud - Introduction to DevOps - DevOps Lifecycle - DevOps Culture & Principles - Agile & DevOps - SDLC Overview - Cloud & DevOps Career Opportunities	MODULE 02 Linux Administration - Linux Fundamentals - Linux Installation - Linux File System - Shell Commands - File Permissions - User & Group Management - Package Management - Process Management - System Monitoring - Environment Variables - SSH Configuration - Cron Jobs
MODULE 03 Git & Version Control - Git Fundamentals - Introduction to Git - Git Installation - Git Configuration - Repository Management - Staging & Commit - Branching - Merging - Rebasing (Introduction) - Conflict Resolution - Tags & Releases - Git Best Practices	MODULE 04 Networking for Cloud - Networking Fundamentals - Computer Networks - OSI Model - TCP/IP Model - IPv4 & IPv6 - Subnetting Basics - DNS - DHCP - HTTP & HTTPS - FTP - SSH - VPN
MODULE 05 Cloud Platforms - Amazon Web Services (AWS) - AWS Introduction - AWS Global Infrastructure - IAM - EC2 - EBS - S3 - VPC - Route 53 - Elastic Load Balancer - Auto Scaling - CloudWatch	MODULE 06 Containerization with Docker - Docker Fundamentals - Introduction to Docker - Containers vs Virtual Machines - Docker Installation - Docker CLI - Docker Images - Docker Containers - Dockerfile - Docker Compose - Docker Volumes - Docker Networks - Docker Registry

MODULE 07 | Container Orchestration with Kubernetes

- Kubernetes Fundamentals
- Introduction to Kubernetes
- Kubernetes Architecture
- Pods
- ReplicaSets
- Deployments
- Services
- ConfigMaps
- Secrets
- Namespaces
- Persistent Volumes
- Ingress

MODULE 08 | CI/CD Pipeline Automation

- Continuous Integration
- Introduction to CI/CD
- Jenkins
- GitHub Actions
- Build Automation
- Automated Testing
- Code Quality Checks
- Artifact Management
- Release Management
- Version Control Integration
- Build Monitoring
- Continuous Deployment

MODULE 09 | Infrastructure as Code (IaC)

- Infrastructure Automation
- Introduction to IaC
- Terraform Fundamentals
- Providers
- Resources
- Variables
- Modules
- State Management
- Provisioning Cloud Resources
- Infrastructure Versioning
- Best Practices
- Configuration Management

MODULE 10 | Monitoring, Logging & Security

- Monitoring
- Infrastructure Monitoring
- Server Monitoring
- Application Monitoring
- Cloud Monitoring
- Performance Monitoring
- Resource Utilization
- Alerting
- Dashboard Creation
- Log Collection
- Incident Monitoring
- Logging & Security

MODULE 11 | DevOps Project Deployment

- Deployment Practices
- Deploying Static Websites
- Deploying Node.js Applications
- Deploying Java Applications
- Deploying Python Applications
- Deploying Dockerized Applications
- Kubernetes Deployment
- Database Deployment
- Reverse Proxy with Nginx
- Domain Configuration
- SSL Certificate Installation
- Production Management

MODULE 12 | AI for Cloud & DevOps

- AI-Powered DevOps
- ChatGPT for DevOps
- GitHub Copilot
- AI Script Generation
- AI Infrastructure Automation
- AI Log Analysis
- AI Troubleshooting
- AI Documentation
- AI CI/CD Optimization
- AI Cloud Cost Analysis
- AI Productivity Workflows

Practical Projects & Industry Capstones

- AWS Cloud Infrastructure Setup
- Dockerized Web Application
- Kubernetes Cluster Deployment
- CI/CD Pipeline using Jenkins
- GitHub Actions Deployment Pipeline
- Terraform Infrastructure Project
- Ansible Server Automation
- Cloud Monitoring Dashboard
- Highly Available Web Application
- Auto-Scaling Cloud Infrastructure
- End-to-End DevOps Pipeline
- Production Cloud Deployment Project

■ Industry Certification

Authorized certificate verified globally via online portal.

■ 100% Placement Support

Resume review, mock interviews, and recruiter connections.

■ Lab Access & Mentorship

Dedicated workstation lab hours with expert guidance.