

# CAREER ENTRICK

## Project Training





***DEVOPS  
PRACTITIONER  
COURSE BY  
CLOUDZENIX***

# MODULES

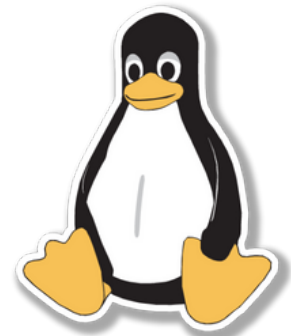
## 01 Overview of DevOps

- Understanding the Need for DevOps
- Transitioning to DevOps Methodology
- Technical Challenges in DevOps Adoption
- Current DevOps Market Trends
- Exploring DevOps Tools Landscape
- Introduction to Continuous Integration and Continuous Delivery (CI/CD)



## 02 Linux and Shell Scripting

- Linux Architecture and Filesystem
- Essential Linux Bash Commands
- Managing Services, Users, and Groups
- Utilizing Sed, Awk, Cut, Find, echo, printf, cron, etc.
- Working with Loops: while and ForLoop
- Introduction to Shell Scripting
- Networking and Operating System Management Basics



## 03 Version Control with Git and Bitbuckets

- Source Code Management using GitHub UI
- Evolution and Importance of Version Control
- Comparison between Centralized and Distributed Version Control Systems
- Mastering Git Commands via Command Line
- Cloning, Committing, Forking, Merging, Pull Requests, GitDiff, Logs
- Diving into Advanced Concepts like Cherry-Picking



## 04 Build Automation with Maven

- Managing Dependencies from Central Repository
- Building Projects from Source Code
- Running Tests and Generating Reports
- Packaging Code into JAR or WAR Files
- Artifacts Management in Local/Remote Repositories



## 05 CI/CD Pipeline using Jenkins

- Installing and Configuring Jenkins
- Jenkins Configuration and Management
- Setting Up Build Jobs in Jenkins
- Integrating Jenkins with Git
- Incorporating Maven into Jenkins Workflow
- Understanding Jenkins Dashboard and User Management
- Building Continuous Delivery Pipelines with Git, Jenkins, and Maven



## 06 Cloud Platform - AWS

- Fundamental Concepts of Cloud Computing
- Introduction to Amazon Web Services (AWS)
- Exploring Infrastructure as a Service (IAAS), Software as a Service (SAAS), Platform as a Service (PAAS)
- In-Depth Study of EC2, AMI, Security Groups, Keypairs, S3, Public, Elastic IP
- IAM Roles and CloudWatch for Monitoring
- Network Segmentation with VPC: Public and Private Infrastructure
- Overview of ASG (Auto Scaling Group), ELB (Elastic Load Balancing), and EKS (Elastic Kubernetes Service)



## 07 Infrastructure Provisioning with Terraform

- Grasping the Concept of Infrastructure as Code (IAC)
- Introduction to Terraform and its Role in IAC
- Working with JSON Templates for Infrastructure Management
- Creating and Managing Infrastructure Using Terraform
- Utilizing Multiple Modules for Modular Infrastructure
- Integrating Terraform with AWS for Automated Infrastructure Deployment
- Updating and Maintaining Existing Terraform Templates



## 08 Configuration Management using Ansible

- Deep Dive into Configuration Management
- Understanding Configuration Automation and Desired State Configuration
- Leveraging Ansible for Continuous Configuration Automation
- Implementing Server-Client Based and Remote Configuration Automation
- Introduction to Ansible Tools, Ad Hoc Commands, and Modules
- Creating Configuration Templates with YAML
- Crafting Playbooks for Efficient Configuration Management



## 09 Containerization with Docker

- Introduction to Docker and Containerization
- Hands-On Experience with Containers and Docker CLI
- Writing Dockerfile Templates for Image Creation
- Docker Hub Usage: Repository, Push, and Pull Operations



## 10 Orchestration using Kubernetes

- Mastering Command and Args in Kubernetes
- Unveiling the Power of Kubernetes and its Importance
- Setting Up Kubernetes Clusters using Minikube
- Deploying Pods, ReplicaSets, Nodes, DaemonSets, and InitContainers



## 11 Monitoring with Prometheus and Grafana

- Monitoring Virtualized Infrastructures
- Installation, Configuration, and Maintenance of Monitoring Tools
- Practical Exposure to Prometheus and Grafana for Efficient Monitoring



## 12 Bonus Topics

- Engaging Hands-On Projects for Practical Learning
- Exploring the Intersection of AI and DevOps



## Contact US

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