

# **DEVOPS**

Course Duration: 6 Months

# **Contact Us**

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Job Assistance
Provided

Project submitted by Wingslide Technologies in partnership with Design Shore Technologies. Branches in NZ & AUS

# DevOps Mastery Program: Automate, Deploy, and Scale with Confidence

Accelerate your tech career with our DevOps program designed for real-world impact. Gain expertise in tools like Git, Jenkins, Docker, Kubernetes, Ansible, and Terraform. Learn to automate infrastructure, streamline CI/CD pipelines, and deploy scalable applications across cloud platforms like AWS, Azure, and GCP. Build production-grade projects and become job-ready with end-to-end DevOps experience and career support.

# **Tools & Technologies**

**Git** 

**GitHub** 

Jenkins

Ocker

Kubernetes

Ansible

Prometheus

**Grafana** 

✓ Terraform

AWS

Linux

Shell Scripting

Maven

npm

**ELK Stack** 

GitHub Actions

#### **Outcomes & Certification**

- ✓ Industry-Ready DevOps Skillset
- ✓ Certification from Wingslide Technologies
- Resume & GitHub Portfolio Review
- ✓ Job Readiness: Interview Prep & Career Guidance

# **COURSES DETAILS**

# 1. DevOps Fundamentals & Culture

- OevOps: Evolution, Principles & Business Impact
- Oev vs. Ops vs. DevOps: Bridging the Gap
- OevOps Lifecycle & CALMS Framework
- Ø Agile, Lean, and Continuous Delivery Concepts
- OevOps in the Real World: Use Cases & Case Studies

#### 2. Version Control with Git & GitHub

- ✓ Introduction to Git: Repository, Commit, Branching
- Merging, Conflict Resolution, and Rebase
- GitHub Actions for Workflow Automation

# 3. Linux for DevOps Engineers

- Linux Command-line Essentials
- File Systems, Permissions, Process Management
- Networking Commands and Tools
- Shell Scripting Basics
- SSH and Remote Server Access

# 4. Build Tools & Dependency Management

- Introduction to Build Automation
- Maven (Java), Gradle Overview

FLEXIBLE LEARNING!!
STUDY ANYTIME, ANYWHERE

ONLINE OR OFFLINE

- onpm/yarn for Node.js Applications
- ✓ Integrating Build Tools with CI Pipelines

# 5. Continuous Integration with Jenkins

- ✓ Jenkins Installation and Configuration
- Freestyle Jobs vs. Pipeline-as-Code
- ✓ Integrating Git, Maven/npm, and Test Suites
- Automated Builds, Notifications & Code Quality Tools
- Jenkinsfile & Declarative Pipelines

## 6. Infrastructure Automation with Ansible

- ✓ Configuration Management & Idempotency
- ✓ YAML Syntax and Playbook Creation

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- Managing Dynamic Inventories
- Application Deployment with Ansible

#### 7. Containerization with Docker

- Virtualization vs. Containerization
- Ocker Architecture and Workflow
- ✓ Docker Images, Containers, Volumes, and Networking
- Creating Custom Dockerfiles
- Multi-Container Applications with Docker Compose

### 8. Kubernetes - Container Orchestration

- Kubernetes Architecture: Pods, Nodes, Clusters
- Opployments, ReplicaSets, Services
- ✓ Managing K8s using kubectl
- ♥ ConfigMaps, Secrets, and Volumes
- Helm Charts (Introduction) for Package Management

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# 9. Monitoring, Logging & Alerting

- ✓ Need for Observability in DevOps
- Monitoring with Prometheus
- Visualization Dashboards with Grafana
- Centralized Logging with ELK Stack (Elasticsearch, Logstash, Kibana)
- ✓ Metrics, Alerts, and SLA/SLO Tracking

# 10. Cloud Platforms & Infrastructure as Code (IaC)

This module provides a comprehensive introduction to major cloud service providers—AWS, Google Cloud Platform (GCP), and Microsoft Azure—alongside the fundamentals of Infrastructure as Code (IaC). Learners will explore how cloud platforms are leveraged in DevOps environments to deploy, scale, and manage applications efficiently.

### **Key Topics Covered:**

#### A. Cloud Fundamentals & Services Overview

- Core cloud concepts: IaaS, PaaS, SaaS
- Global infrastructure: Regions, Zones, Resource Groups
- Cost optimization and pricing models

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#### B. Hands-on with Major Cloud Platforms

- AWS: EC2, S3, IAM, CloudWatch, CodePipeline
- GCP: Compute Engine, Cloud Storage, IAM, Cloud Build
- Azure: Virtual Machines, Blob Storage, Azure DevOps, Azure Monitor

#### C. Infrastructure as Code (IaC)

- What is IaC? Benefits & real-world applications
- Introduction to Terraform
- Writing and applying basic Terraform scripts for AWS/GCP/Azure
- Reusable templates and provisioning multi-cloud environments

#### D. CI/CD in the Cloud

- Automated testing and deployment workflows
- Building deployment pipelines using:
  - AWS CodePipeline + CodeDeploy
  - GCP Cloud Build + Cloud Deploy
  - Azure Pipelines

### **E. Cloud Security Essentials**

- Identity & Access Management (IAM)
- Secrets management and environment variables
- Encryption, firewalls, and secure access practices

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#### **Outcome:**

Participants will be capable of working across multiple cloud environments, provisioning cloud infrastructure using Terraform, and building secure and scalable CI/CD pipelines in AWS, GCP, and Azure. This module ensures a strong foundation in multi-cloud DevOps practices—crucial for enterprise-level deployments.

## 11. Containerization with Docker

- Git → Jenkins → Docker → Kubernetes → Monitoring
- ✓ Planning, Execution, and Deployment of projects
- Peer Review and Final Presentation
- ✓ Portfolio-ready GitHub Project

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# Ready to Master the Power of DevOps and Continuous Delivery?

Join the program today and turn your passion into a rewarding career!

# Why Choose Wingslide?

- Hands-On Learning: Build real-world CI/CD pipelines and infrastructure setups using tools like Git, Jenkins, Docker, and Kubernetes. Work on end-to-end deployment projects across cloud environments.
- Industry-Standard Tools: Master key DevOps tools and technologies such as Git, GitHub, Jenkins, Ansible, Docker, Kubernetes, Terraform, and major cloud platforms like AWS, Azure, and GCP.
- Advanced Concepts: Learn to automate infrastructure, implement monitoring and logging, manage cloud deployments, and ensure scalability, security, and reliability in modern DevOps workflows.

Start your DevOps journey at Wingslide today and gain the expertise to automate, deploy, and scale applications across any environment!

At Wingslide, we equip you with the skills, tools, and hands-on experience to streamline software delivery through automation, CI/CD pipelines, and cloud deployment. Master DevOps to drive agility and efficiency in today's fast-paced tech landscape.

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