

DevOps Foundation and Automation Tools (Docker, Kubernetes, Jenkins)

Cairo (Egypt)

13 - 17 June 2027

UK Training

PARTNER



DevOps Foundation and Automation Tools (Docker, Kubernetes, Jenkins)

Code: IT32 From: 13 - 17 June 2027 City: Cairo (Egypt) Fees: 4900 Pound

Introduction

In today's digital era, DevOps has become the cornerstone of organizational transformation, bridging the gap between development and operations teams to enhance collaboration, efficiency, and innovation.

The DevOps Foundation and Automation Tools Docker, Kubernetes, Jenkins program equips participants with the knowledge and skills to implement automation and continuous improvement practices that accelerate software delivery, enhance quality, and reduce operational risks.

This training provides a balanced blend of theory and practical application, enabling participants to design and manage modern development environments using industry-leading tools for automation, containerization, and continuous integration and delivery.

It is a strategic step for professionals seeking to boost operational performance and drive digital excellence within their organizations.

Course Objectives

- Understand the core principles and lifecycle of DevOps.
- Explore the strategic importance of integrating development and operations.
- Apply automation practices using Docker, Kubernetes, and Jenkins.
- Build integrated development and deployment environments using containers.
- Create automated continuous integration and delivery pipelines.
- Manage and scale applications effectively using container orchestration tools.
- Analyze performance and optimize deployment processes.
- Design and implement scalable, automated infrastructure.

Course Outlines

Day 1: DevOps Concepts and the Foundation of Automation

- Introduction to DevOps and its strategic value.
- Bridging the gap between development and operations teams.
- Principles of continuous integration and continuous delivery.
- The role of automation in improving software quality.
- Overview of key DevOps tools and ecosystems.
- Practical exercises for identifying automation opportunities.

Day 2: Introduction to Docker and Containerization

- Understanding containers and how they differ from virtual machines.
- Installing Docker and setting up the working environment.



- Creating and managing Docker images and containers.
- Using Docker Compose to manage multi-service applications.
- Best practices for container security and efficiency.
- Hands-on exercise: building and deploying a simple application using Docker.

Day 3: Container Management with Kubernetes

- Overview of Kubernetes and its architecture.
- Core components: Pods, Nodes, Clusters, and Services.
- Deploying and managing applications in a Kubernetes environment.
- Scaling applications and enabling self-healing capabilities.
- Configuring services and ingress for traffic management.
- Practical exercise: deploying a containerized application using Kubernetes.

Day 4: Continuous Integration and Delivery with Jenkins

- Introduction to Jenkins and its role in DevOps automation.
- Setting up Jenkins and building CI/CD pipelines.
- Integrating Jenkins with version control and container tools.
- Automating tests and ensuring code quality.
- Managing builds, releases, and deployments.
- Hands-on exercise: creating a complete CI/CD pipeline from build to deployment.

Day 5: Integrated Implementation and Advanced Optimization

- Combining Docker, Kubernetes, and Jenkins into a unified ecosystem.
- Designing scalable and resilient DevOps architectures.
- Monitoring and analyzing performance through automation tools.
- Troubleshooting and improving operational reliability.
- Implementing backup and disaster recovery strategies.
- Capstone project: full practical assessment to apply learned skills.

Why Attend this Course: Wins & Losses!

- Gain a comprehensive understanding of DevOps foundations and automation tools.
- Develop hands-on, practical skills applicable to real-world environments.
- Enhance operational efficiency and reduce human errors through automation.
- Accelerate delivery cycles while maintaining high software quality.
- Build scalable and flexible development ecosystems.
- Learn to deploy and manage cloud-based applications efficiently.
- Acquire experience in creating fully automated CI/CD pipelines.
- Strengthen your professional growth with in-demand technical skills.

Conclusion

The DevOps Foundation and Automation Tools Docker, Kubernetes, Jenkins course serves as a crucial gateway to mastering modern automation and continuous integration practices. It combines conceptual learning with real-world

PARTNER





implementation, providing participants with the expertise to build and manage automated, scalable development environments.

By leveraging tools such as Docker for containerization, Kubernetes for orchestration, and Jenkins for continuous integration, professionals can significantly improve operational agility, reliability, and performance. Applying these practices within the workplace translates into measurable improvements in productivity, quality, and innovation. Ultimately, this course represents a strategic investment for anyone aiming to lead digital transformation and operational excellence in the technology-driven future.

Head Office: +44 7480 775 526
Email: Sales@blackbird-training.com
Website: www.blackbird-training.com



Blackbird Training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior,
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



General Organization for
Social Insurance
KSA



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



Authority for
Electricity Regulation, Oman

UK Training
PARTNER



Blackbird Training Categories

Management & Admin

Entertainment & Leisure
Professional Skills
Finance, Accounting, Budgeting
Media & Public Relations
Project Management
Human Resources
Audit & Quality Assurance
Marketing, Sales, Customer Service
Secretary & Admin
Supply Chain & Logistics
Management & Leadership
Agile and Elevation

Technical Courses

Artificial Intelligence (AI)
Sustainability, ESG & Corporate Responsibility
Advanced Courses
Hospital Management
Public Sector
Special Workshops
Oil & Gas Engineering
Telecom Engineering
IT & IT Engineering
Health & Safety
Law and Contract Management
Customs & Safety
Aviation
C-Suite Training

