GTC Transforming Emerging Economies

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Containerization with Docker & Kubernetes

COURSE OVERVIEW

The Containerization with Docker & Kubernetes course provides a detailed understanding of container technologies and orchestration frameworks that power modern application deployment and scalability. Participants will explore the principles of containerization, including the isolation of applications, portability, and efficient resource utilization., Through the course, delegates will gain practical experience in creating Docker images, managing containers, configuring Kubernetes clusters, and deploying real-world applications in scalable, resilient cloud-native environments.

WHO SHOULD ATTEND?

This course is designed for developers, DevOps engineers, system administrators, and IT professionals seeking to enhance their skills in modern application deployment and cloud-native practices. Networking professionals aiming to streamline workflows or transition to microservices architecture will also benefit from this course.

COURSE OUTCOMES

Delegates will gain the skills and knowledge to:

- Understand the fundamentals of containerization and its role in modern software delivery.
- Build, manage, and optimize Docker containers and images.
- Set up and configure Kubernetes clusters for orchestration.
- Deploy, scale, and manage applications across distributed environments.
- Implement container networking, storage, and monitoring solutions.
- Apply best practices in security, resource management, and high availability.
- Integrate Docker and Kubernetes into CI/CD (Continuous Integration/Continuous Delivery) pipelines for agile development.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- Introduction to Containerization fundamentals and differences from traditional virtualization.
- Docker essentials and container lifecycle management.
- Kubernetes fundamentals, covering architecture, pods, services, deployments, and namespaces
- Setting up Kubernetes clusters, nodes, kubelet, and kubectl commands.
- Application deployment strategies, including scaling, rolling updates, self-healing, and load balancing.
- Container networking models, persistent volumes, and storage classes.
- Container security best Practices including RBAC (Role Based Access Control), secrets management, and securing containerized environments.
- Integrating docker and kubernetes into automated CI/CD pipelines.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded.