



JAVA TRAINING

Java Docker Kubernetes Microservices Course

Master Java microservices development with Docker and Kubernetes for scalable, cloud-native applications.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

- Globally Recognized Certification

- Expert-Led Hands-On Training

- Flexible Scheduling

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COURSE OVERVIEW

This intermediate-level course is designed for Java developers eager to master the art of building and deploying modern, scalable microservices architectures. You'll dive deep into integrating Java, specifically with the Spring Boot framework, with industry-leading containerization and orchestration technologies: Docker and Kubernetes. The curriculum meticulously guides you through transforming monolithic applications into resilient microservices, packaging them efficiently with Docker, and orchestrating their deployment and management in a Kubernetes cluster.

Upon completion, you will possess the practical skills to develop, containerize, and deploy sophisticated Java-based microservices, ensuring high availability, scalability, and maintainability. This course not only enhances your technical proficiency but also significantly boosts your marketability in the rapidly evolving landscape of cloud-native development. You'll be well-equipped to contribute to projects requiring robust, distributed systems, making you an invaluable asset to any modern IT team.

The course emphasizes hands-on learning through practical exercises and real-world scenarios, enabling you to confidently apply your new knowledge immediately.

Duration	2 hours
Level	Intermediate
Vendor	Java

COURSE CURRICULUM

01 Module 1: Foundations of Java Microservices with Spring Boot

- Introduction to Microservices Architecture Principles
- Designing and Developing RESTful APIs with Spring Boot
- Data Persistence Strategies in Microservices (e.g., separate databases)
- Inter-service Communication Patterns (Synchronous & Asynchronous)
- Service Discovery Concepts and Implementation

02 Module 2: Containerizing Java Applications with Docker

- Introduction to Docker: Concepts, Images, Containers
- Writing Optimized Dockerfiles for Spring Boot Applications
- Managing Docker Images and Container Lifecycle
- Networking and Volume Management for Containers
- Local Microservices Orchestration with Docker Compose

03 Module 3: Deploying and Managing Microservices on Kubernetes

- Kubernetes Architecture: Master, Nodes, Pods, Deployments
- Crafting Kubernetes Manifests for Java Microservices (YAML)
- Service Discovery and Load Balancing in Kubernetes (Services, Ingress)
- Configuration Management with ConfigMaps and Secrets
- Scaling and Rolling Updates for Deployments

04 Module 4: Advanced Microservices Patterns & Cloud-Native Practices

- Implementing API Gateways for Microservices
- Resilience and Fault Tolerance Patterns (e.g., Circuit Breakers, Retries)
- Introduction to Centralized Logging for Microservices

- Basic Monitoring and Health Checks with Kubernetes and Spring Boot Actuator
- Brief overview of CI/CD concepts for containerized Java applications

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Senior Java Microservices Developer**
- > **Cloud-Native Software Engineer**
- > **DevOps Engineer (with a focus on Java ecosystem)**

FREQUENTLY ASKED QUESTIONS

Q: What prior Java experience is required to effectively benefit from this Java Docker Kubernetes Microservices Course?

This course is designed for intermediate Java developers. A solid understanding of core Java, Spring Framework basics (especially Spring Boot), and experience building RESTful APIs is essential. Familiarity with command-line interfaces and basic Linux commands will also be beneficial.

Q: How does this specific course prepare me for deploying Java applications in a cloud-native or enterprise environment?

This course directly addresses the core competencies for cloud-native deployment. You will learn to break down monolithic Java applications into manageable microservices, containerize them using Docker, and orchestrate their deployment, scaling, and management efficiently on Kubernetes, which is the de facto standard for cloud-native application deployment across major cloud providers. This holistic approach makes you proficient in modern enterprise application delivery.

Q: Will I gain hands-on experience deploying multiple interconnected Java microservices, and what specific tools will be utilized?

Absolutely. The course is highly practical. You will build and deploy several interconnected Java microservices from scratch. Key tools and technologies used include Java 17+, Spring Boot, Maven/Gradle, Docker, Docker Compose, Kubernetes (using Minikube or a similar local cluster for exercises), and basic terminal commands for interaction.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

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