Containerization and ERP Training Course

Professional Development Training Course Outline

Category	Enterprise Resource Planning (ERP)	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In the era of Digital Transformation and Cloud-Native adoption, the convergence of efficient application deployment and streamlined business processes is paramount for organizational success. This intensive course addresses the critical need for professionals skilled in two fundamental areas: Containerization and Enterprise Resource Planning (ERP). Containerization, powered by technologies like Docker and Kubernetes, is revolutionizing the software development lifecycle (SDLC) by providing unprecedented Portability, Scalability, and Fault Isolation. By packaging applications with all dependencies into lightweight, isolated units, it solves the perennial "works on my machine" problem, ensuring consistent performance from development to production, which is vital for modern, Microservices Architecture.

Containerization and ERP Training Course is specifically designed to equip participants with the hands-on expertise to integrate and manage containerized applications within complex ERP ecosystems. ERP systems, the backbone of modern business, manage critical operations like Finance, Supply Chain, and HR. However, traditional ERP deployments are often Monolithic and rigid. By learning how to leverage Container Orchestration for ERP Modernization, participants will gain a competitive edge in automating deployment, achieving High Availability, and significantly improving Resource Utilization. The course delivers a Blended Learning experience, focusing on Role-Based Training with practical Case Studies to master the future of enterprise technology and drive Business Process Improvement.

Programme Curriculum

Containerization and ERP Training Course

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Course Duration

5 days

Course Objectives

1. Master Docker Fundamentals and container lifecycle management.
2. Implement Container Orchestration using Kubernetes for scaling.
3. Design and deploy Microservices Architecture for ERP components.
4. Integrate containers into CI/CD Pipelines for DevOps Automation.
5. Apply Container Security Best Practices and vulnerability scanning.
6. Analyze the core functionalities of major ERP Modules
7. Evaluate different ERP Deployment Models
8. Formulate strategies for ERP Modernization via "lift-and-shift" with containers.
9. Optimize Resource Utilization and cost efficiency using container limits.
10. Execute zero-downtime deployments and Blue/Green Deployments for ERP updates.
11. Perform container Monitoring and Logging using tools like Prometheus and Grafana.
12. Manage persistent data and stateful applications in a Containerized ERP environment.
13. Drive Business Process Improvement through ERP integration and automation.

Target Audience

1. DevOps Engineers
2. Software Developers
3. System Administrators and IT Operations Staff
4. Cloud Architects and Cloud Migration Specialists
5. ERP Consultants and Implementation Specialists
6. IT Managers and Project Managers
7. Data Warehouse/Pipeline Engineers
8. Solution Architects

Course Modules

Module 1: Containerization Fundamentals with Docker

- Understanding the Docker architecture
- Building efficient Docker images using Multi-Stage Builds.
- Managing container networking, volumes, and persistent storage.
- Containerizing a basic ERP component
- Case Study: Legacy Application Migration.

Module 2: Advanced Container Orchestration with Kubernetes

- Kubernetes architecture.
- Deploying multi-container applications using YAML manifests.
- Scaling applications, self-healing, and performing rolling updates.
- Implementing Ingress Controllers and Service Mesh concepts
- Case Study: High Availability.

Module 3: CI/CD and DevOps for Containerized Applications

- Integrating container image building and scanning into a CI/CD Pipeline.
- Automating container deployment using tools like Jenkins, GitLab CI, or GitHub Actions.
- Implementing Infrastructure as Code for Kubernetes resources
- Strategies for environment parity using containers.
- Case Study: Accelerated Deployment

Module 4: Enterprise Resource Planning (ERP) Core Concepts

- Overview of ERP systems and their role in Business Process Management.
- Deep dive into core ERP modules
- Understanding Master Data Management and transactional data flow within an ERP.
- Key challenges and best practices in ERP implementation and customization.
- Case Study: Process Integration

Module 5: Containerizing the ERP Ecosystem

- Identifying ERP components suitable for Microservices Architecture decomposition.
- Techniques for 'lift-and-shift' of existing monolithic ERP services.
- Managing state and database connections for containerized ERP backends.
- Networking and communication between containerized services and traditional ERP modules.
- Case Study: ERP Modernization.

Module 6: Cloud & Hybrid ERP Deployment Strategies

- Deploying containers on major cloud platforms
- Understanding the Hybrid Cloud model for connecting on-premises ERP with cloud-native applications.
- Securing the cloud environment for sensitive ERP data.
- Leveraging serverless containers for burstable ERP workloads.
- Case Study: Multi-Cloud Strategy.

Module 7: Container Security and Observability

- Container Security lifecycle.
- Implementing role-based access control within Kubernetes for a multi-tenant ERP setup.
- Centralized logging with the ELK stack or similar tools.
- Monitoring and Alerting for container health, performance, and resource utilization.

- Case Study: Compliance Audit.

Module 8: Advanced Topics and Future Trends

- FinOps principles and cost optimization for running containers at scale.
- Data Migration strategies for ERP data to cloud-native storage.
- Introduction to Edge Computing and its potential for specialized ERP functions
- Exploring the future role of AI/ML in both container orchestration and ERP process automation.
- Case Study: Future-Proofing.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call +254769199797

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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