Docker for Local ERP Development Training Course

Professional Development Training Course Outline

Category	Enterprise Resource Planning (ERP)	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today's fast-paced world, businesses require highly efficient and scalable solutions to streamline their operations. Docker, a popular platform for developing, shipping, and running applications inside containers, has emerged as a transformative tool in software development and DevOps practices. By enabling developers to package applications along with their dependencies into lightweight containers, Docker helps improve system reliability and scalability while reducing conflicts between different computing environments. Docker for Local ERP Development is an essential training program aimed at equipping developers with the knowledge to deploy ERP systems locally using Docker, facilitating faster development cycles and reducing overhead costs. Docker for Local ERP Development Training Course focuses on the core principles of containerization and its application to local ERP systems, enabling businesses to enhance their ERP solutions with greater flexibility and efficiency.

As businesses grow and digital transformation becomes increasingly critical, the need for robust, scalable, and easy-to-manage ERP systems has never been more pressing. The Docker for Local ERP Development course combines foundational Docker concepts with advanced ERP deployment techniques to equip developers with the skills to enhance their software development lifecycle. By focusing on Docker's advantages for local ERP development, this course provides practical hands-on experience and deep insights into container-based deployment strategies. Participants will learn how to leverage Docker's potential to streamline ERP solutions, overcome technical barriers, and maximize productivity in an agile development environment.

Programme Curriculum

Docker for Local ERP Development Training Course

Introduction

In today's fast-paced world, businesses require highly efficient and scalable solutions to streamline their operations. Docker, a popular platform for developing, shipping, and running applications inside containers, has emerged as a transformative tool in software development and DevOps practices. By enabling developers to package applications along with their dependencies into lightweight containers, Docker helps improve system reliability and scalability while reducing conflicts between different computing environments. Docker for Local ERP Development is an essential training program aimed at equipping developers with the knowledge to deploy ERP systems locally using Docker, facilitating faster development cycles and reducing overhead costs. Docker for Local ERP Development Training Course focuses on the core principles of containerization and its application to local ERP systems, enabling businesses to enhance their ERP solutions with greater flexibility and efficiency.

As businesses grow and digital transformation becomes increasingly critical, the need for robust, scalable, and easy-to-manage ERP systems has never been more pressing. The Docker for Local ERP Development course combines foundational Docker concepts with advanced ERP deployment techniques to equip developers with the skills to enhance their software development lifecycle. By focusing on Docker's advantages for local ERP development, this course provides practical hands-on experience and deep insights into container-based deployment strategies. Participants will learn how to leverage Docker's potential to streamline ERP solutions, overcome technical barriers, and maximize productivity in an agile development environment.

Course Duration

10 days

Course Objectives

1. Master Docker fundamentals to understand containerization, image creation, and container management.
2. Learn to containerize ERP applications, ensuring that all components run seamlessly within isolated environments.
3. Implement Docker Compose for managing multi-container applications and creating ERP environments.
4. Integrate ERP modules effectively into a Dockerized local development environment.
5. Automate Docker workflows for improved efficiency in ERP deployment and development pipelines.
6. Leverage Docker Swarm for orchestrating multi-node local ERP deployments.
7. Ensure security in Dockerized ERP solutions by applying best practices and securing containerized environments.
8. Optimize resource management for ERP systems by utilizing Docker’s resource allocation features.
9. Troubleshoot and debug issues within Dockerized ERP systems with efficient logging and monitoring tools.
10. Apply version control strategies to Docker images and containers for smoother ERP updates and rollbacks.
11. Scale ERP applications using Docker, ensuring scalability and high availability in local development environments.
12. Reduce the development lifecycle time by creating lightweight containers for ERP systems.
13. Enable continuous integration and deployment (CI/CD) pipelines using Docker and Jenkins, facilitating rapid ERP development iterations.

Target Audience

1. Software Developers.
2. DevOps Engineers.

3. ERP System Administrators.
4. IT Managers.
5. Product Owners.
6. Cloud Engineers.
7. Business Analysts.
8. Students and Professionals.

Course Modules

Module 1: Introduction to Docker

- Understanding the concept of containers and containerization.
- The architecture of Docker and its key components.
- How Docker differs from traditional virtualization.
- Installing Docker on local environments.
- Case Study: Basic Docker commands and operations.

Module 2: Docker Basics and Commands

- Creating Docker images and containers.
- Docker container lifecycle: run, stop, pause, and remove containers.
- Building and running Docker images.
- Dockerfile syntax and structure.
- Case Study: Understanding Docker logs and debugging.

Module 3: Containerizing ERP Applications

- Understanding ERP system requirements and architecture.
- Containerizing different ERP modules.
- Handling databases in Docker for ERP systems.
- Configuring and managing environment variables for ERP applications.
- Case Study: Containerizing a popular open-source ERP system (e.g., Odoo).

Module 4: Using Docker Compose

- Introduction to Docker Compose and its benefits.
- Setting up multiple containers for complex ERP environments.
- Creating and managing docker-compose.yml files.
- Networking between containers in Docker Compose.
- Case Study: Setting up a multi-container local ERP environment using Docker Compose.

Module 5: Security Best Practices for Docker

- Securing Docker containers and images.
- Best practices for minimizing attack surfaces in Dockerized environments.
- Securing communication between containers in Docker.
- Working with user permissions and access control.
- Case Study: Security audit of a Dockerized ERP system.

Module 6: Advanced Docker Networking

- Understanding Docker's networking model.

- Configuring container networks for ERP applications.
- Networking between Docker containers and external services.
- Troubleshooting network issues in Docker environments.
- Case Study: Network configuration for a large-scale local ERP system.

Module 7: Docker Swarm for Local ERP Deployment

- Introduction to Docker Swarm and clustering.
- Deploying and managing local ERP systems with Docker Swarm.
- Scaling ERP services in Docker Swarm.
- Managing multi-node Docker Swarm clusters.
- Case Study: Using Docker Swarm to scale a local ERP system.

Module 8: Monitoring and Logging in Dockerized ERP Systems

- Setting up logging for Docker containers.
- Monitoring container performance in real time.
- Using tools like Prometheus and Grafana for Docker container metrics.
- Troubleshooting Dockerized ERP applications.
- Case Study: Real-time monitoring of a Dockerized ERP solution.

Module 9: Optimizing Dockerized ERP Performance

- Fine-tuning Docker container resource usage.
- Best practices for optimizing ERP system performance in Docker.
- Managing memory, CPU, and disk usage for containers.
- Case Study: Performance benchmarking of a Dockerized ERP application.

Module 10: Version Control in Docker

- Managing Docker images and versions.
- Best practices for versioning Dockerized ERP applications.
- Rollback strategies for Docker containers and images.
- Tagging and managing different ERP versions in Docker.
- Case Study: Version control for ERP system deployments with Docker.

Module 11: CI/CD for ERP Applications Using Docker

- Setting up a continuous integration pipeline for Dockerized ERP systems.
- Automating Docker builds and deployments with Jenkins.
- Integration of Docker with version control systems like GitHub.
- Creating deployment workflows for Dockerized ERP applications.
- Case Study: Building an automated CI/CD pipeline for an ERP system using Docker.

Module 12: Resource Management in Docker

- Docker resource limits
- Resource monitoring and management strategies for Docker containers.
- Managing system resource conflicts with Dockerized ERP systems.
- Scaling containers based on resource usage.
- Case Study: Resource optimization for an ERP system running in Docker.

Module 13: Troubleshooting Dockerized ERP Applications

- Identifying and fixing common Docker-related issues.
- Docker container logs and debugging tools.
- Handling database connection issues in Docker.
- Network troubleshooting in Dockerized ERP applications.
- Case Study: Solving common issues in a Dockerized ERP environment.

Module 14: Docker for Hybrid ERP Solutions

- Introduction to hybrid cloud architectures for ERP.
- Containerizing hybrid ERP applications with Docker.
- Managing on-premise and cloud-based ERP components in Docker containers.
- Ensuring synchronization and consistency in hybrid ERP environments.
- Case Study: Building a hybrid ERP solution with Docker containers.

Module 15: Final Project: Dockerizing a Complete ERP System

- Step-by-step process for Dockerizing a full ERP system.
- Integration of all modules learned throughout the course.
- Containerizing databases, application services, and web interfaces.
- Troubleshooting and optimizing the Dockerized ERP solution.
- Case Study: Full deployment of a Dockerized ERP system in a local development environment.

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
21 Sep 2026	02 Oct 2026	Online	$2,000
21 Sep 2026	02 Oct 2026	Physical	$3,000
21 Sep 2026	02 Oct 2026	Physical	$0
21 Sep 2026	02 Oct 2026	Physical	$0
21 Sep 2026	02 Oct 2026	Physical	$0
21 Sep 2026	02 Oct 2026	Physical	$0
21 Sep 2026	02 Oct 2026	Physical	$0
21 Sep 2026	02 Oct 2026	Physical	$0
21 Sep 2026	02 Oct 2026	Physical	$0

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com