Event-Driven Integration (Kafka) with 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 today’s fast-paced digital ecosystem, organizations are striving for real-time data processing, seamless system integration, and scalable enterprise solutions. Event-driven architectures (EDA) powered by Apache Kafka have emerged as a revolutionary approach to integrating complex ERP systems with other enterprise applications. Event-Driven Integration (Kafka) with ERP Training Course is designed to equip participants with hands-on skills, practical knowledge, and strategic insights to implement high-performance event-driven solutions. Leveraging stream processing, microservices integration, and message-driven workflows, participants will learn how to ensure data consistency, operational efficiency, and business agility across all systems.

This course emphasizes real-world applications of Kafka in ERP ecosystems, covering event streaming, data pipelines, transactional integrity, and scalable messaging frameworks. Participants will gain expertise in designing robust integration architectures, managing asynchronous data flows, and troubleshooting complex event-driven systems. By the end of the training, learners will be capable of orchestrating seamless ERP integrations, optimizing workflow automation, and delivering enterprise-grade solutions that drive business innovation and operational excellence.

Programme Curriculum

Event-Driven Integration (Kafka) with ERP Training Course

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Course Duration

5 days

Course Objectives

1. Master event-driven architecture for enterprise ERP integration.
2. Implement real-time data streaming using Apache Kafka.
3. Design scalable, fault-tolerant messaging pipelines.
4. Integrate ERP systems with microservices via Kafka.
5. Optimize asynchronous data flows for business agility.
6. Ensure data consistency and transactional integrity.
7. Apply Kafka Streams for complex data transformations.
8. Develop event-driven workflows for operational efficiency.
9. Troubleshoot Kafka cluster performance issues.
10. Enhance business process automation using EDA.
11. Implement enterprise-grade logging and monitoring.
12. Explore cloud-native Kafka integration with ERP.
13. Gain hands-on experience with real-world case studies.

Target Audience

1. Enterprise Architects
2. ERP Developers and Consultants
3. Integration Specialists
4. Data Engineers
5. System Administrators
6. IT Managers and Decision Makers
7. Solution Architects
8. Technical Project Managers

Course Modules

Module 1: Introduction to Event-Driven Architecture & Kafka

- Overview of **EDA principles**
- Kafka architecture & core components
- commands, events, and notifications
- Advantages of event-driven ERP integrations

- Case Study: Real-time order processing in SAP using Kafka

Module 2: Kafka Setup & Cluster Management

- Installing Kafka and Zookeeper
- Cluster configuration & replication strategies
- Producer and Consumer basics
- Kafka security
- Case Study: Setting up Kafka cluster for finance ERP transactions

Module 3: ERP System Integration with Kafka

- Connecting SAP, Oracle, and Microsoft Dynamics to Kafka
- API vs event-based integration
- Data mapping and schema registry
- Handling transactional consistency
- Case Study: Automated invoice processing in ERP using Kafka

Module 4: Data Streaming & Real-Time Processing

- Introduction to Kafka Streams
- Transforming and aggregating ERP data in real-time
- Handling late or out-of-order events
- Stateless vs stateful stream processing
- Case Study: Real-time inventory updates for retail ERP

Module 5: Designing Event-Driven Workflows

- Event choreography and orchestration patterns
- Event sourcing & CQRS in ERP systems
- Designing robust messaging pipelines
- Monitoring workflow execution and alerts
- Case Study: HR payroll processing using event-driven architecture

Module 6: Monitoring, Logging, and Troubleshooting

- Kafka monitoring tools
- Metrics, logging, and alerting best practices
- Troubleshooting producer/consumer issues
- Performance tuning and scaling strategies
- Case Study: Resolving delayed shipment notifications in ERP

Module 7: Cloud & Microservices Integration

- Kafka in cloud environments
- Microservices communication patterns with Kafka
- Containerization and orchestration with Docker & Kubernetes
- Event-driven APIs and serverless integration
- Case Study: Multi-region ERP synchronization using Kafka

Module 8: Advanced Kafka Concepts & Capstone Project

- Kafka Connect & connectors for ERP systems

- Exactly-once semantics & transactional messaging
- Schema evolution and governance
- Hands-on capstone: End-to-end ERP integration project
- Case Study: End-to-end supply chain automation with Kafka and ERP

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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