ERP APIs: REST / SOAP Integration 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 digital enterprise landscape, ERP API integration is the backbone of automation, scalability, and real-time data synchronization. ERP APIs: REST / SOAP Integration Training Course equips professionals with the skills to connect, customize, and optimize ERP systems using modern API frameworks. Participants will gain hands-on experience in designing, deploying, and troubleshooting RESTful and SOAP-based web services to streamline operations across platforms like SAP, Oracle, Microsoft Dynamics, and NetSuite.

This course empowers learners to master API lifecycle management, secure ERP communication, and automate workflows for digital transformation. Through a combination of interactive labs, industry case studies, and live projects, participants will gain the confidence to deliver robust ERP integrations that drive efficiency, business intelligence, and cloud interoperability.

Programme Curriculum

ERP APIs: REST / SOAP Integration Training Course

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5 days

Course Objectives

1. Understand the fundamentals of REST and SOAP APIs for ERP systems.
2. Configure and deploy ERP connectors for seamless data exchange.
3. Build and test custom API endpoints using Postman and Swagger.
4. Implement secure authentication with OAuth 2.0, JWT, and API keys.
5. Integrate ERP APIs with CRM, SCM, and financial systems.
6. Master JSON and XML payload management.
7. Automate data migration and synchronization workflows.
8. Utilize API gateways and middleware for scalable integrations.
9. Apply best practices for API performance optimization.
10. Troubleshoot ERP API errors and bottlenecks.
11. Deploy APIs in cloud environments (AWS, Azure, GCP).
12. Use real-world ERP API analytics and monitoring tools.
13. Develop enterprise-ready integration strategies using REST / SOAP standards.

Target Audience

1. ERP Developers and Integration Engineers
2. API Architects and Backend Developers
3. IT Managers and Solution Architects
4. Software Consultants and System Analysts
5. Cloud Engineers and DevOps Professionals
6. Data Integration Specialists
7. Business Process Automation Experts
8. Technical Leads and Project Managers

Training Modules

Module 1: Introduction to ERP API Ecosystem

- Overview of ERP architecture and integration needs
- REST and SOAP
- Common ERP API frameworks
- Data communication and serialization formats
- Case Study: Connecting SAP ERP with Salesforce CRM

Module 2: RESTful API Design & Implementation

- REST principles and HTTP methods
- Building REST endpoints and resources
- Request/response cycles and status codes
- Postman, Swagger, Insomnia

- Case Study: Building REST APIs for Oracle ERP Cloud

Module 3: SOAP API Essentials

- SOAP envelope, headers, and fault handling
- WSDL, UDDI, and XML schema design
- Interfacing SOAP with ERP modules
- SoapUI, ReadyAPI
- Case Study: Integrating SOAP APIs with Microsoft Dynamics NAV

Module 4: Authentication & Security

- OAuth 2.0, JWT, and Basic Auth configurations
- SSL/TLS encryption and certificate management
- Role-based access control and API policies
- ERP API security audits and penetration testing
- Case Study: Securing REST APIs in SAP S/4HANA

Module 5: ERP API Integration & Middleware

- API gateways
- Connecting ERP to third-party apps
- Event-driven integration using webhooks
- Data mapping and transformation techniques
- Case Study: Integrating NetSuite ERP with AWS Lambda

Module 6: Performance Optimization & Monitoring

- Load balancing and caching strategies
- API throttling and rate limiting
- Error handling and debugging best practices
- Kibana, Grafana, Postman Monitors
- Case Study: Enhancing API response time in Oracle ERP

Module 7: Cloud-Based ERP API Deployments

- ERP API hosting on AWS, Azure, and GCP
- CI/CD pipelines for API delivery
- Containerization with Docker and Kubernetes
- API lifecycle management in cloud environments
- Case Study: Deploying ERP APIs on Azure Integration Services

Module 8: Real-World ERP API Project

- Full-cycle ERP API design and implementation
- Testing, documentation, and version control
- Project presentation and peer review
- Post-deployment monitoring and support strategy
- Case Study: Unified REST/SOAP integration for multi-ERP enterprise

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

Start Date	End Date	Location	Price
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

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

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