



# MFE-IT

Reference: OF/EN/AR

## REST API Training Course

Create, Expose, and Integrate Secure and Scalable Web Services

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*Duration: 4 Days | Hours: 28 h*

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*Remote · Sessions guaranteed from 1 registrant · 60% hands-on practice*

## DESCRIPTION

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APIs are now at the heart of all modern architectures, enabling applications, services and platforms to communicate effectively. A well-designed API is a strategic asset; a poorly designed one is a long-term liability.

This REST API training course teaches you how to design a complete API, document it, secure it and consume it across different contexts (web, mobile, server). You will discover best practices in terms of technology and business, as well as industry standards (HTTP, JSON, OpenAPI/Swagger, OAuth 2.0).

## LEARNING OBJECTIVES

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By the end of this training course, participants will be able to:

- Understand the fundamental concepts of RESTful APIs
- Design a clear, maintainable and scalable API
- Implement an API with a language such as PHP, Node.js, Python or Java
- Document the API with OpenAPI / Swagger
- Manage security: authentication (token, OAuth2), authorisation, CORS
- Consume APIs on the client side (JavaScript, Postman, no-code tools)
- Monitor, test and version an API in production

## PREREQUISITES

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- Solid foundation in web programming (PHP, JavaScript, Python, etc.)
- Understanding of HTTP and client-server requests
- Knowledge of JSON and the command-line environment recommended

*Because each participant is unique, a personalised interview is systematically organised in advance with our expert to design a training programme perfectly aligned with their objectives, level and professional challenges.*

## TARGET AUDIENCE

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Back-end developers, integrators, technical project managers and DevOps profiles working with web services.

## DETAILED PROGRAMME

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The training alternates between theoretical input and hands-on practice (approximately 60% of the time). Modules are built around practical exercises based on real-world business use cases.

### Module 1 – Understanding REST APIs

- Definition of REST and comparison with SOAP
- HTTP verbs, statelessness and resource lifecycles
- JSON format and content types

### Module 2 – Designing a RESTful API

- Best practices for routes (/users, /products/:id)
- HTTP status codes, pagination, filters and sorting
- Resource modelling and HATEOAS principles

### Module 3 – Implementing an API

- Examples in Node.js (Express) or PHP
- CRUD endpoints and database access
- MVC architecture or service-based patterns

### Module 4 – Documentation with OpenAPI / Swagger

- Defining schemas and operations
- Online testing with Swagger UI
- Generating documentation readable by humans and machines

### Module 5 – Securing an API

- CORS, HTTPS and TLS best practices
- Authentication: JWT, OAuth 2.0, API keys
- Role-based access control and permissions

### Module 6 – Consuming an API on the Client Side

- fetch, axios and Postman
- No-code tools and microservice integration
- Processing responses and error handling

## Module 7 – Testing, Monitoring and Versioning

- Postman tests and Swagger validators
- CI/CD integration and contract testing
- API versioning (v1, v2) and backward-compatible upgrades

## TEACHING METHODS

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### Format and Delivery

The training is delivered remotely via an interactive virtual classroom. It can also be delivered on-site, with content customised to match the needs of your professional project. The theory/practice split is approximately 40%/60%.

### MFE-IT Ultra-Personalised Format

Each session accommodates between 1 and 3 participants, ensuring highly individualised support. A preliminary interview allows us to tailor the content to each participant's profile. Inter-company sessions are guaranteed from just 1 registrant (except in cases of force majeure).

### Skills Assessment

Throughout the training, the trainer assesses participant progress through multiple-choice questions, role-playing exercises and hands-on work. At the end, a certificate of achievement is issued to each participant.

### Post-Training Support

For one month following the training, each participant can contact MFE-IT trainers with questions about implementing acquired knowledge. A response is provided by email or telephone within 48 working hours.

### Accessibility

MFE-IT is committed to welcoming people with disabilities. Contact: [contact@mfe-it.com](mailto:contact@mfe-it.com).

## PRACTICAL INFORMATION

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### Trainer Resources

- Structured demonstrations aligned with the detailed programme
- Exercise briefs and solutions throughout the training
- A ready-to-use technical environment for practical workshops
- Trainer validation of acquired knowledge at the end of each workshop
- Digital reference documents

## **Certification and Validation**

At the end of the training, a certificate is sent by email specifying the objectives, nature, duration and assessment results. A completion certificate can also be provided on request.

## **Benefits for Participants**

- Train from your workplace or home, with no travel required
- Benefit from an expert trainer-consultant on the subject
- Enjoy an ultra-personalised format (1 to 3 participants)
- Continue training even in the event of unforeseen circumstances

## **Benefits for the Organisation**

- Optimise the training budget by reducing travel and accommodation costs
- Offer quality training to all employees, regardless of location
- Reduce absence time linked to travel
- Support team upskilling in all contexts