



# MFE-IT

Reference: PH/EN/2RZ

## React.js, Redux and Zustand Training Course

Build Reactive Web Applications with Centralised State  
Management

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*Duration: 3 Days | Hours: 21 h*

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

## DESCRIPTION

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React.js is currently the most widely used JavaScript library for developing fast, modular and responsive user interfaces. But to build complex applications, it is essential to know how to manage state centrally and efficiently.

This React.js training course guides you through the creation of modern web applications with React, combining functional components, routing, and two approaches to state management: Redux (classic and robust) and Zustand (modern, minimalist and efficient).

## LEARNING OBJECTIVES

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

- Master component creation with modern React (hooks, JSX, events)
- Manage navigation with React Router
- Understand the principles of global state management
- Implement an architecture with Redux (store, reducers, actions, middleware)
- Discover and use Zustand for lighter and more scalable state management
- Develop a complete SPA application with API calls and centralised state

## PREREQUISITES

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- Basic proficiency in JavaScript ES6+, HTML and CSS
- Experience with a JS framework or library (Vue, Angular, etc.) is desirable
- Some initial experience with React is a plus but not required

*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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Front-end developers, full-stack JavaScript developers and individuals developing their skills in React.

## 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 – React.js Fundamentals

- Functional components, JSX and props
- State management with hooks (useState, useEffect)
- Event handling and component composition

### Module 2 – Routing and Navigation in a SPA

- Setting up React Router and route configuration
- Dynamic routes, links and programmatic navigation
- Nested routes and route guards

### Module 3 – Introduction to Redux

- Store, reducers, actions and selectors
- Redux hooks (useSelector, useDispatch) and Redux Toolkit
- Scalable architecture and slice patterns

### Module 4 – Middleware and Side Effects

- Redux Thunk for asynchronous logic
- API call management with loading and error states
- Payload structure and normalised state design

### Module 5 – API Calls and Asynchronous Data

- fetch, axios and HTTP client patterns
- REST and GraphQL integration
- Caching, retries and error boundaries

### Module 6 – Zustand: the Modern Alternative

- Creating a Zustand store and consuming state
- Comparison with Redux: boilerplate, performance and DX
- Migration patterns and choosing the right tool

## Module 7 – Final Project: Complete SPA Application

- End-to-end SPA with routing and global state
- REST API integration, authentication and persistence
- Component organisation and production-ready patterns

## 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