

REST APIs

Duration: 2 Days **Course Code: RESTAPI** **Delivery Method: Company Event**

Overview:

REST APIs Course Overview

REST APIs are a staple for developers the world over. Whether it's to provide a web app with access to server data or to facilitate comms between microservices, REST APIs have exploded in popularity due to their simplicity and flexibility.

This course comprises sessions dealing with prerequisite topics including HTTP and JSON, core REST theory, the building of REST services and clients, REST API configuration including caching and HATEOAS, and yet more REST theory including the Richardson Maturity Model, the n+1 problem, and authentication techniques.

Exercises and examples are used throughout the course to give practical hands-on experience with the techniques covered.

Delegates have the option of coding in either Java, Python, or JavaScript.

Company Events

These events can be delivered exclusively for your company at our locations or yours, specifically for your delegates and your needs. The Company Events can be tailored or standard course deliveries.

Target Audience:

Who will the Course Benefit?

This course will benefit developers who are required to build or maintain REST services and/or clients, and anyone otherwise interested in what a REST API is, how it works, and how to build a good one.

Objectives:

Course Objectives

- This course aims to provide the delegate with the skills and knowledge necessary to design and build good quality REST APIs.
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Prerequisites:

- Delegates attending this course should have some knowledge of, or experience in, software development. Ideally delegates will be comfortable coding in Java, Python, or JavaScript to a fundamental level. This knowledge can be gained by attendance on one of the following courses.
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Follow-on-Courses:

Further Learning

- Core Spring (4 day)
 - Python Programming 2
 - Developing Node.js Web Applications
 - GraphQL
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Content:

REST APIs Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: PREREQUISITES

- APIs
- Web apps
- Web services
- HTTP
- JSON
- Serialisation

Session 2: REST THEORY

- What is a REST API?
- Guiding principles/constraints
- Resources
- Methods
- Naming

Session 3: REST SERVICES

- Designing a REST API
- Building a REST service with:
 - Spring Boot (Java) or;
 - Flask (Python) or;
 - Express (JavaScript)

Session 4: REST CLIENTS

- Off-the-shelf REST clients, e.g. Postman
- Building a REST client with:
 - HttpClient (Java) or;
 - Requests (Python) or;
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Session 5: REST API CONFIGURATION

- Caching
- Compression
- Content negotiation
- HATEOAS
- Idempotence
- Security
- Versioning
- Statelessness
- Documentation

Session 6: MORE REST THEORY

- The Richardson Maturity Model
- Searching, sorting, and pagination
- The n+1 problem
- PUT vs. POST
- Authentication techniques

Further Information:

For More information, or to book your course, please call us on 0800/84.009

info@globalknowledge.be

www.globalknowledge.com/en-be/