

Introduction to RESTful API Testing

2 Day Course

This course is ideal for anyone new to testing APIs. It focuses on RESTful Web Services as the most popular type of Web Service, and particularly around functional testing.

The course helps you understand the technologies involved and the terminology, and then looks at different techniques for testing RESTful APIs including Command Line Tools, GUI based Tools, and finally programmatically as part of an automated test framework.

Throughout the course practical examples are demonstrated, and the delegates get to practice what they have learned in each chapter against a demo REST API Service.

Course Objectives

- Understand what APIs are and the different types
- Explore Web Services and the Clients we can use to access them
- Understand why & what we need to test
- Choose a suitable Tool & approach to testing your Web Services

Technologies used in this course

- cURL
- Postman
- Visual Studio, SpecFlow, Nunit, RESTSharp

Course Pre-requisites

- None

Key Points

Introduction to APIs & Web Services

What is an API?, What are Web Services? SOAP vs REST, Clients, Requests & Responses, Response Codes, XML, JSON

Testing Web Services

Why Test, What to Test, Functional & Non-Functional Testing, Explore the demo RESTful Service

cURL

Installation, sending requests, analysing responses, authentication, POSTing JSON

GUI Tools

A look at tools available, basics of using Postman

Writing Tests in Postman

Using templates, checking values, checking response times, collection runner

Test Dependencies

capturing values and re-using them in other tests, variable scope & types of variables

Data-driven Requests

Using CSV data files in Postman Requests

Using WADL, Open API Files

Importing APIs, WSDL, WADL, Open API formats. Importing Open API into Postman to create collections

Postman Command Line Execution

Executing Postman Collections from the command line

Introduction to BDD Gherkin

What is BDD, What is Gherkin, writing Feature Files, Tools

Setting up BDD in Visual Studio

Setting up SpecFlow, writing our first .feature file, creating boiler-plate step binding code

Writing Test Code in VS

Using RESTSharp to write our step bindings in Visual Studio to test our Web Service

2
Days

The introductory course that takes you from beginner through to writing effective Tests for Testing RESTful Web Services

Recommended for anyone new API Testing