

KOENIG SOLUTIONS • COURSE OUTLINE

API Testing

Learn to test APIs using Postman, SOAP UI, Ready API and REST Assured, from HTTP basics to automated validation.

4 Days

32 HOURS

5

MODULES

52

TOPICS

COURSE OVERVIEW

The API Testing course is a comprehensive program designed to equip learners with the skills needed to conduct thorough testing of Application Programming Interfaces (APIs), which serve as the backbone of modern web and mobile applications. The course starts with the API Testing Basic module, introducing participants to fundamental concepts such as Client-server architecture, different layers of software development, and the essentials of APIs and API testing. Learners will understand the differences between API testing and unit testing, get an introduction to web services, and learn about HTTP structure, XML, JSON, URIs, URLs, and the tools used for API testing. Throughout the course, participants will gain hands-on experience with tools like Postman and REST Assured, and explore RESTful web services, including the difference between REST and SOAP services. The program covers both basic and advanced topics, ensuring a thorough understanding of API testing techniques, challenges, and best practices. By obtaining an api testing certification, learners will validate their expertise and expand their job opportunities in a market that increasingly demands API testing proficiency. The course also provides a list of api testing certification options for further professional development.

WHO THIS COURSE IS FOR

The API Testing course is designed for IT professionals who want to specialize in software testing and ensure quality in web services.

Software Testers

QA Engineers

Automation Testers

Software Developers interested in testing

Test Managers

API Developers

Performance Test Engineers

Technical Project Managers

Full Stack Developers

DevOps Engineers

IT Professionals who want to learn API testing

Quality Analysts

System Integrators

What You Will Learn

- Explain client-server architecture and core API testing concepts
- Compare API testing with unit testing approaches
- Identify HTTP methods, status codes and web service structures
- Apply Postman to build, chain and validate API requests
- Perform data-driven testing using JSON and CSV files in Postman
- Configure SOAP UI and Ready API for web service testing
- Implement data-driven testing with multiple sources in Ready API
- Develop API test scripts in REST Assured with JSON and XML parsing

COURSE SYLLABUS

5 Modules, 52 Topics

01

Java Basics

TOPICS

- Setting up Java
- Data Types and Operators
- Control Statements
- Arrays and Strings
- OOPS- Class, Object, Method and Constructors
- “this” Keyword
- “static” Keyword
- “super” Keyword
- “final” Keyword
- Inheritance and Interfaces
- Exception Handling
- Java Array Lists and HashMap

02

Overview of API Testing

TOPICS

- Client Server Architecture
- What is API and API Testing?
- Difference between API Testing and Unit Testing
- Overview of Web Services
- HTTP Structure
- HTTP Methods
- Status Codes

03

Testing API's Using Postman Tool

TOPICS

- Overview of Postman Tool
- Setup and Installation
- Basic HTTP requests in Postman
- Create Dummy API's
- Basic of JSON and JSON Path
- Validating Responses in Postman and JavaScripting
- Postman Scripts and Variables
- Chaining Requests
- Data Driven Testing Using JSON and CSV Files
- File Upload and Download API
- Authorization Types
- cURL
- Validating XML Response
- Converting XML Response to JSON
- Documentation and Publishing

04

Web Services Testing with SOAP UI and Ready API Tools

TOPICS

- Introduction to SOAP UI
- Installation of SOAP UI
- SOAP UI Features
- Assertions in SOAP UI
- SOAP UI Properties
- Property Transfer
- Data-Driven Testing
- Data Driven Testing using Multiple Data Sources in SOAP UI Pro (Ready API)

05

API Testing Using Rest Assured

TOPICS

- Environment Setup and Http Methods
- Create Request PayLoad (Request Body)
- Types of Parameters, Headers, Cookies and Logging
- Parsing JSON Responses
- Parsing XML Response
- File Upload and Download API
- JSON & XML Schema Validations
- Serialization and DE-Serialization
- Authentication Types
- API Chaining

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com

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