**ABOUT THE COURSE**

This course is designed to cover all aspects of API testing & SOAP UI tool and also to provide users with the knowledge required to work with SOAP UI tool at a professional level. This course addresses planning and performing API tests, developing the pre-test & post-test scripts using SOAP UI, executing the API tests.

The course covers real-world best practices for effective use of SOAP UI tool for API testing with practical examples.

An assessment is included with the course and is a 30 minutes exam, **20 questions, multiple- choice exam** which takes place on the final day of training program.



This course is designed in such a way that the user can start the things from the very scratch without any prior knowledge on API Testing OR SOAP UI tool.

**DELIVERY METHOD**

Instructor-Led -Training (ILT) | ONLINE |DIRECT

**COURSE DURATION**

3 Days | 24 Hours | 8 Hours per day

**COURSE OBJECTIVES/BUSINESS OUTCOMES**

**By the end of this course, you will become an API testing professional using SOAP UI tool:**   
  
**BO1** You will get complete knowledge on REST API Automation testing  
**BO2** In-depth understanding of REST API Automation using SOAP UI tool with real time examples

**BO3** How to test Webservices and REST API using SOAP UI tool  
  
**COURSE SYLLABUS**

**DAY 1**

**CHAPTER 1: COURSE INTRODUCTION**

**CHAPTER 2: API INTRODUCTION**

* Introduction to web application architecture
* Introduction to
  + Client & Server model
  + HTTP & HTTPS protocols
  + SSL & TLS protocols
  + Hand-shake process
  + HTTP Request Headers
  + HTTP Response Headers
  + Request & Response Cookies
  + HTTP Methods/HTTP verbs
* Safe methods vs Unsafe methods
  + GET
  + POST
  + PUT
  + PATCH
  + DELETE
  + OPTIONS & HEAD
* Introduction to APIs
* Where does an API reside i.e., middle-ware layer/business layer
* Introduction to API architecture/Web-Services
  + REST API
  + SOAP API

**CHAPTER 3: API TESTING**

* What is API testing?
* Advantages of API testing
* Validation techniques used in API testing
* Definition of API --> Understanding Protocol, API URI, end points, Query Parameters, Resources, HTTP verbs, Request body, Authentication type

**DAY 2**

**CHAPTER 4: INTRODUCTION TO SOAP UI API TESTING TOOL**

* What is SOAP UI tool
* Installation of Native SOAP UI open source tool
* Introduction to SOAP UI landscape/GUI
* Introduction to SOAP UI Settings
* Introduction to Workspaces
* How to create/Rename/ Switch Workspaces in SOAP UI
* How to create Project in SOAP UI
* Creating Test Suites, Test Cases & Test Steps in SOAP UI tool
* Explaining Webservice operations in detail

**CHAPTER 5: API TESTING USING SOAP UI**

* Understanding SOAP WSDL
* Understanding REST URI
* Exploring API URIs & WSDL files
* SOAP UI Hierarchy
* Executing first SOAP UI project
* Executing first REST API project
* Understanding the Response Body, Response Headers, Response Code etc
* Executing REST API with authentication
* Introducing Delay between API executions
* Introducing Manual Steps between API executions
* Introduction to Properties [global, project, test suite, test case, test step]
* Introduction to Properties [global, project, test suite, test case, test step]
* Manual setting of Properties [global, project, test suite, test case, test step]
* Groovy script to read the value of Properties [global, project, test suite, test case, test step]
* How to get properties [using groovy script]
* How to set/create properties [manually & using groovy script]
* How to add properties [manually & using groovy script]
* How to remove properties [manually & using groovy script]
* How to run sequentially the API tests
* How to run parallelly the API tests
* How to run tests continuously in a loop
* Introduction to logs - How to debug & troubleshoot
  + SOAP UI log
  + Http log
  + Error log
  + Jetty logs/java related logs
  + Wsrm logs [windows system resource manager logs]
  + Memory log
  + Test suite log
  + Test case log
  + Test step log
  + Groovy script output log
  + BIN folder logs [general logs, error logs

**DAY 3**

**CHAPTER 6: SOAP UI API AUTOMATION-PART 1**

* How to use Assertions [manually & using groovy scripts] – SOAP WSDL
* How to use Assertions [manually & using groovy scripts] – REST URI
* What/How is Property transfer useful
* Introduction to Setup script
* Introduction to Teardown script
* Load from test script
* Introduction to Alert Site
* Usage of Monitors
* How to run a Test Step Request from GUI, Groovy and Command Line
* How to run a Test Case Request from GUI, Groovy and Command Line
* How to run a Test Suite Request from GUI, Groovy and Command Line
* How to run a Project Request from GUI, Groovy and Command Line
* How to run a test case using ‘Test On Demand’
* How to import Postman collections to SOAP UI tool
* API Test Cases at a generic level – a complete checklist

**CHAPTER 7: SOAP UI API AUTOMATION-PART 2**

* Data Driven Testing
* Creating A Data Source
* Creating Data Driven Test Parameters
* Load testing of API testing in SOAP UI tool
* Security testing of APIs in SOAP UI tool
* Running and analyzing Load Test results

**CASE STUDY/ASSIGNMENT**

* SOAP UI Tool hands on assignments against a Web-Services/APIs
* Writing Test Cases for a API situation requirement

**PRE-REQUISITIES:**

Good understanding of:

1. Websites and web browser
2. Client Server architecture
3. Web Services/APIs
4. Basic knowledge of HTTP/HTTPS
5. Basic understanding of HTTP methods

**WHO SHOULD ATTEND:**

1. IT Engineers, software developers, and project managers who want to learn API automation testing
2. Manual tester who want to switch their career to API automation testing
3. Fresher/Graduates who want to start their career in this field

**COURSE HIGHLIGHTS:**

**HANDS-ON PROJECT BASED LEARNING**

The training focuses on real-time scenarios used during automation testing. Diverse Industry exposure & live multiple use cases.

**MENTORING & SUPPORT**

1 on 1 interaction for individual attention. Diverse industry exposure.

**EXPERT TRAINER**

The trainer is an Industry expert with 17+ years of IT experience in Functional Automation Testing

**LAB SET-UP:**

1. Windows OS 7 or higher OR MAC OS 10.11 or higher
2. CPU – 2GHz or faster 32-bit or 64-bit processor
3. RAM - 8GB RAM ; HDD – 5 GB HDD space availability
4. Download SOAP UI tool from <https://www.soapui.org/downloads/latest-release/>
5. Internet access to public web-sites/public APIs