



### Learning Objectives of CP-WST

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*"Knowledge with experience is power; certification is just a by-product"*

### **Certified Professional Web Services Testing (CP-WST)**

#### **What is CP-WST?**

Certified Professional Web Services Testing program is designed to train and uplift the knowledge of a test professional on Web Services, Web Services Testing techniques and test automation tools that will be utilized for web services testing and validation.

#### **How is it useful?**

Most of the organizations today deliver their applications utilizing web services. Web UI, Mobile and Desktop applications are now integrated to web services to do enterprise level functionality where they can deliver thin applications to the clients and move the complex functionality to server. Web services are the foundations for the creation of internet of things and Micro services-based enterprise level applications. When testing applications, it is utmost important to test web services or API level before moving up to the UI level testing and automation like Selenium. This program is a all in one program which will create the skill and expertise for any test professional to learn on web services testing and related tool stack. The course tends to look at tools and technologies which are demanded by the industry where the user will get hands on experience and certification to be a top notched web services test engineer.

#### **Changes in version 1.05**

This is version 1.05 of the CP-WST program. The changes in the syllabus for the CP-WST program in this version are

1. More focus is now given to Rest-Assured including Hamcrest library
2. Rest-Assured and Cucumber section has been now added
3. Continuous testing using Jenkins has been now introduced
4. Fidler section is now not part of the syllabus (removed)
5. Unirest section is now not part of the syllabus (removed)

The changes in the CP-WST program are done on the current market trends. The two most popular tools for API testing are Postman and Rest Assured. More focus on Postman was given in the version 1.04 and this version has increased coverage on Rest Assured. Fidler and Unirest were not adding any additional value hence the coverage has been dropped.



## CP-WEB SERVICES TESTING

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### Am I Eligible for taking the exam?

CP-WST certification exam is an open exam. Any test professional who is already aware of using tools like Postman, Newman, Rest Assured and Karate can appear for the exam.

### Training eligibility and Duration

Anyone who has the enthusiasm to learn web services testing and who has a basic knowledge in Java can join the training program. Program is of 2-3 full days of instructor led program depending on participants readiness.

### Learning Objectives of CP-WST:

1. Introduction to Web Services / API
  - 1.1. What is a web service?
  - 1.2. Web Services v/s API
  - 1.3. Examples of Web Services
  - 1.4. Advantages of Web Services
  - 1.5. Types of Web Services - SOAP and REST
  - 1.6. Web services architecture
  - 1.7. Web services characteristics
  - 1.8. REST v/s SOAP
  - 1.9. Creation of Demo REST Web Service
  - 1.10. What is API/Web Service Testing
  - 1.11. API Testing Strategy
  - 1.12. Web services components
    - 1.12.1. HTTP Request
    - 1.12.2. HTTP Methods (GET, PUT, POST, DELETE, ...)
    - 1.12.3. Request, Response
    - 1.12.4. Status codes (1xx, 2xx, 3xx, 4xx, 5xx )
  - 1.13. Authentication and Authorization
  - 1.14. OAuth 1.0 and OAuth 2.0
2. Testing web services with Postman
  - 2.1. API Testing Tools usage
  - 2.2. Introduction to Postman
  - 2.3. Collections in Postman
  - 2.4. Start testing with Postman on GET/POST/DELETE/PUT request
  - 2.5. Environment Variables in Postman
  - 2.6. Test and Collection Runner in Postman
  - 2.7. Monitor Collections
  - 2.8. Assertions in Postman with Chai Assertion Library
  - 2.9. Different types of Asserts in Postman
  - 2.10. API Call chain testing
3. Test Automation with Postman and Newman
  - 3.1. Installation and Pre-requisites.
  - 3.2. Running your test automation scripts in Newman
  - 3.3. Executing you Postman scenarios with Newman
  - 3.4. Integration of Newman with Jenkins



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4. Test Automation with RestAssured
  - 4.1. Rest Assured Basics
  - 4.2. Configure Eclipse with Rest-Assured
  - 4.3. REST API Test
  - 4.4. Automate GET/POST/PUT and DELETE request
  - 4.5. Validate Response Status
  - 4.6. Validate Response Header
  - 4.7. Read JSON Response Body
  - 4.8. Data driven with JSON/XML and Excel in Rest Assured
  - 4.9. Using Cucumber to run BDD style API testing scenarios
  
5. Test Automation with Karate
  - 5.1. Overview
  - 5.2. Karate and BDD
  - 5.3. Installation and Configuration of Karate
  - 5.4. Creating tests in Karate
    - 5.4.1. Testing the Status Code
    - 5.4.2. Testing the Response
    - 5.4.3. Validating Response Values with Markers
  - 5.5. Running Tests
  
6. Continuous API testing
  - 6.1. Continuous testing using Jenkins
  - 6.2. Calling Rest Assured programs from Jenkins jobs
  - 6.3. Calling Newman jobs from Jenkins
  
7. Micro services testing
  - 7.1. Introduction to Micro services architecture
  - 7.2. Types of Micro services testing
  - 7.3. Importance of API Testing in such an environment

### Tool Coverage (Logos are trademark of the respective organization)

- Postman
- Newman
- Rest Assured
- Cucumber
- Karate
- Jenkins



**REST-assured**



**cucumber**



**Jenkins**