

Webservices/API Testing FAQ's

Part-3



SoapUI



Ready! API

43.What is SOAPUI & ReadyAPI?

- SOAPUI is a Webservices/API Testing tool.
- SOAPUI Pro (Ready API) which is Licensed version of SOAPUI

44. What is WSDL?

- WSDL stands for **Web Service Description Language** and is a document written in XML.
- It uses XML to define the service layer document which consists of origin of the web service, headers, port types, request and response data.
- This one can provide the information about web methods and web service.
- It describes:
 - Origin of the web service
 - Header information
 - Port type
 - Input and output messages

45. What is the role of WSDL document in web service testing?

- Validating web services is only possible with WSDL document because to configure web services in SoapUI, WSDL document is mandatory. If the WSDL document is not valid, SoapUI will throw an exception immediately.

46. What is UDDI?

- Universal Description, Discovery and Integration- a directory or global repository where all the web services can be found.
- A new Webservice can also be registered through this.
- This is also the place where WSDL detailed definitions are found.

47. What is SOAP?

- Simple Object access protocol that uses XML to interact with web applications.
- It uses XML based content to communicate between two client machines across any network

48. What would be the message format of SOAP protocol?

- Generally, all the SOAP-based web services are written by using XML language which uses standard message format that is accepted across the universe. In this format, it is easy to read, identify the errors, avoids interoperability problems etc.
- Here's the sample SOAP message format.

```
POST /InStock HTTP/1.1
Host: localhost
Content-Type: application/soap+xml; charset=utf-8
Content-Length: 399
SOAPAction: "http://www.example.com/soap-envelope"

<?xml version="1.0"?>
<soap:Envelope xmlns:soap="http://www.example.com/soap-envelope">
  <soap:Header>
  </soap:Header>
  <soap:Body>
    <m:TutorialName>SoapUI</m:TutorialName>
  </soap:Body>
</soap:Envelope>
```

49. What are the advantages of SOAP?

- Since its XML based, it is platform and programming language independent. RPC (Remote procedure calls) are sometimes blocked by firewalls and proxy servers- Soap overcomes that.

50. SoapUI and SoapUI Pro?

- SoapUI is a web service testing tool and SoapUI Pro is its commercial version.
- SoapUI can help create functional, security and load testing test suites.
- SoapUI Pro does all that with advanced drag and drop, Data Driven testing, advanced reporting and coverage analysis.

51.What we can do with the help of SoapUI?

- SoapUI offers us to perform automation testing which includes functional testing, load testing and Data Driven testing.
- It also provides in build reporting tool and export test results
- We assert our services using various types of assertions

52. What hierarchy does SoapUI follow to build a proper testing project?

- In a SoapUI project, the following order maintained.
- TestSuite – This is combination of functional tests and logical blocks
- Testcase – It's a group that contains several test steps for the specific aspects of the service.
- Teststep – it contains the set of functional tests

53.What is the basic method to automate web services in SoapUI?

- Create a project and add the WSDL file
- Add test suites, Test cases and Test cases- in that order
- Include custom programming/validation using by adding Groovy steps
- Call external data sources if using
- Add assertions if necessary
- Then RUN.

54. What are SoapUI assertions?

- Assertions compare the parts/all of the response message to the expected outcome.

55. What are the major types of assertions available in SoapUI?

- Assertions are one of the major features in SoapUI. It offers the following types of assertions.
- Simple contains
- Schema compliance
- Simple not contain
- Soap Faults
- Response SLA
- XPath Match
- XQuery Match
- WS security status
- Script Assertion
- WS- Addressing Request or Response Assertion
- Additionally, **Equals** assertion is introduced in SoapUI NG Pro version.

56. Explain about XPath Assertion in SoapUI

- In SoapUI, XPath assertion is used for asserting the web service response value by specifying the absolute path.
- If the absolute path is matched with the response value, then the test case or test suite will be considered as PASS otherwise it will be notified as FAILED.
- We can see the results of assertion at bottom of the screen where the Assertion tab will have resultant information.

57. What is Data Driven testing?

- Data Driven testing means to store our test data which includes input and expected output in an external data source called Excel / Database / XML file. Later, we need to iterate the data source using respective component.
- In SoapUI, Datasource and Datasource Loop test steps are used for performing data driven testing.

58. What are the different types of assertions used in SoapUI?

- The following are the different types of assertions:
- Contains & Not Contains
- XPath match
- XQuery match
- Schema compliance
- Soap Faults
- Response SLA
- WS security Status
- Script Assertion
- WS- Addressing Request or Response Assertion

59. What is Groovy script and where can it be used?

- Groovy is a scripting language which internally includes all the Java libraries – it helps us to customize and add custom validations to SoapUI tests

60. How to group tests?

- The basic Test suite is a way for us to group tests in SoapUI.
- When you need a different set of tests, you just have to create a new test suite and create tests as required under it as test cases.

61.How to save the responses received?

- The response values can be saved by clicking on the required request and choosing the “Dump file” location in its properties.

62. What are the properties available in SoapUI?

- In SoapUI, there are three levels of properties available. They are,
- **Custom Properties or Project Level Properties:**
- These properties are added several times based on our needs and they can be utilized at any test suites, test cases or test steps that belong to the current project.
- **Test Suite Level Properties:**
- The tester can add his own properties with relevant information under the test suites. These properties are available for the corresponding test suite only.
- **Test case Level Properties:** If the tester needs to store their test data within the test cases they can create their own properties inside the test case. So these properties can be accessed within the respective test cases.

63. What can data sources be used in SoapUI?

- Excel Files
- CSV Files
- ODBC Sources
- SQL / ADO Objects