Configuration Testing

- Configuration Testing is the type of Software Testing that verifies the performance of the system under development against various combinations of software and hardware to find out the best configuration under which the system can work without any flaws or issues while matching its functional requirements.
- Configuration Testing is the process of testing the system under each configuration of the supported software and hardware. Here, the different configurations of hardware and software mean the multiple operating system versions, various browsers, various supported drivers, distinct memory sizes, different hard drive types, various types of CPU, etc.

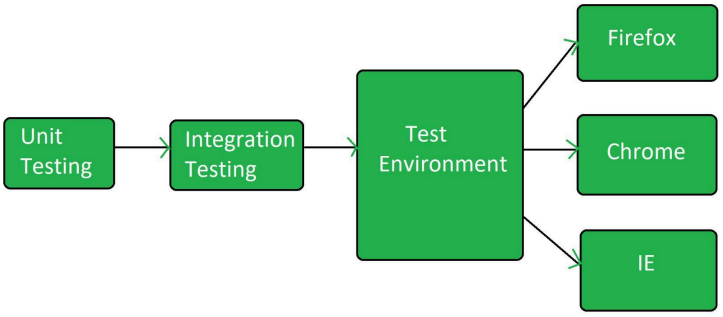
The various configurations are Win XP, Win 7 32/64 bit, Win 8 32/64 bit, Win 10, etc.

- Database Configuration: Oracle, DB2, MySQL, MSSQL Server, Sybase etc.
- Browser Configuration: IE 8, IE 9, FF 16.0, Chrome, Microsoft Edge etc.

Objectives of Configuration Testing:

1. **Adaptability to Different Configurations:** Check that the program's basic features work consistently and dependably in all configurations. Testing the behavior of the program with different setups and settings is part of this process.
2. **Evaluation of Stability:** Examine the software's stability under various configurations. Find and fix any configuration-specific problems that might be causing crashes, unstable systems or strange behavior.
3. **Testing the User Experience:** Assess the value and consistency of the user experience across various setups. Make that the graphical user interface (GUI) of the software adjusts to various screen sizes, resolutions and display settings.
4. **Security Throughout Configurations:** To make sure that sensitive data is kept safe, test the software's security features in various setups. Determine and fix any vulnerabilities that might be configuration-specific.
5. **Compatibility of Networks:** Examine the software's behavior with various network setups. Evaluate its compatibility with various network types, speeds and latency.
6. **Data Compatibility:** Check if the programme can manage a range of data configurations, such as those from diverse sources, databases and file formats. Verify the consistency and integrity of the data across various setups.

Configuration Testing Process:



Types of Configuration Testing:

Configuration testing is of 2 types:

1. **Software Configuration Testing:**
    - Software configuration testing is done over the Application Under Test with various operating system versions and various browser versions etc.
    - It is a time-consuming testing as it takes a long time to install and uninstall the various software which are to be used for testing.
    - When the build is released, software configuration begins after passing through the unit test and integration test.

2. **Hardware Configuration Testing:**
    - Hardware configuration testing is typically performed in labs where physical machines are used with various hardware connected to them.
    - When a build is released, the software is installed in all the physical machines to which the hardware is attached and the test is carried out on each and every machine to confirm that the application is working fine.
    - While doing hardware configuration tests, the kind of hardware to be tested is spelled out and there are several computer hardware and peripherals which make it next to impossible to execute all the tests.

Configuration Testing can also be classified into following 2 types:

- **Client level testing:** Client level testing is associated with the usability and functionality testing. This testing is done from the point of view of its direct interest of the users.
- **Server level Testing:** Server level testing is carried out to determine the communication between the software and the external environment when it is planned to be integrated after the release.

A key component of software testing is configuration testing, which verifies that a programme is compatible, stable and performs at its best in a variety of setups. Delivering a stable and dependable software product that can accommodate the various needs and preferences of customers is crucial. Organizations can establish trust in the software's functionality, security and usability in real-world scenarios by carefully assessing it in a variety of configurations. Master Software Testing and Automation in an efficient and time-bound manner by mentors with real-time industry experience. Join our Software Automation Course and embark on an exciting journey, mastering the skill set with ease!