**Performance Testing**

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**Performance Testing** is a software testing process used for testing the speed, response time, stability, reliability, scalability, and resource usage of a software application under a particular workload.

The goal of Performance Testing is not to find bugs but to eliminate performance bottlenecks(Upto level of bottle means zoom meeting is having limit 500 users if 501 users will join then the 501 is our bottlenecks).The focus of Performance Testing is checking a software program’s

The main purpose of performance testing is to identify and eliminate the performance bottlenecks in the software application. It is a subset of performance engineering and is also known as **“Perf Testing”.**

* **Speed** – Determines whether the application responds quickly
* **Scalability** – Determines the maximum user load the software application can handle.
* **Stability** – Determines if the application is stable under varying loads

## **Types of Performance Testing**

* **Load testing –** checks the application’s ability to perform under anticipated user loads. The objective is to identify performance bottlenecks before the software application goes live.
* **Stress testing –** involves testing an application under extreme workloads to see how it handles high traffic or data processing. The objective is to identify the breaking point of an application.
* **Spike testing –** tests the software’s reaction to sudden large spikes in the load generated by users.
* **Volume testing** – Under Volume Testing large no. of. Data is populated in a database, and the overall software system’s behavior is monitored. The objective is to check software application’s performance under varying database volumes.
* **Scalability testing**– The objective of scalability testing is to determine the software application’s effectiveness in “scaling up” to support an increase in user load. It helps plan capacity addition to your software system.

**Tools Of Performance testing**

1. LoadNinja

2. Apache JMeter

3. WebLOAD

4. LoadUI Pro

5. LoadView

6. NeoLoad

7. LoadRunner

8. Silk Performer

9. AppLoader

10. SmartMeter.io

**Diifference between Jmeter and LoadRunner**

**JMeter**  
JMeter is a tool which is used to test and analyze the load on client and server applications. It is a Java tool. JMeter was developed by Apache Software Foundation, Jakarta, or Apache JMeter for short. It is open-source software to measure the performance and test the functional behavior. Initially, this tool was developed to analyze Web applications but presently has stretched to other functions. JMeter can run its tests on various platforms both static and dynamic as Java objects, FTP servers, files, servlets, SOAP, databases and queries, Pearl scripts, HTTP, POP3, and many more.

**LoadRunner**  
LoadRunner is an automated interactive tool which is used to test the performance of an application. This testing tool is developed by Mercury Interactive to aid in determining the behavior of server and network applications under load normal, stress, and prolonged testing. The LoadRunner performance testing tool was later on taken over by Hewlett-Packard in November, 2006. Mercury has a brand value when comes to testing tools.  
LoadRunner consists of various tools, such as:

Virtual User Generator or VuGen

Controller

Analysis

LoadRunner supports various application environments, databases, and platforms as Web Service, J2EE, .net, ERP/CRM applications from Oracle, SAP, PeopleSoft and Siebel, streaming and wireless media.

It is an extensive tool which can identify most of the bugs. It collects system and component level performance information through an exhaustive array of diagnostic modules and system monitors.

LoadRunner presents you with precise information of end-to-end system performance. It helps to establish the fact that the upgraded versions of the applications are at par with the specified requirements of performance and also eradicates the performance barriers.

**Summary**

1. JMeter is free while LoadRunner is expensive. 2. JMeter licenses on installation while the LoadRunner license is based on the number of virtual users. 3. JMeter has an unlimited load generation capacity while LoadRunner has a limited load generation capacity. 4. JMeter is technically less proficient while LoadRunner is highly developed and complex. 5. JMeter lacks in the user interface while that of LoadRunner is impressive.