Performance Testing

Agenda

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Jmeter

What is Performance Testing?

Performance Testing

Performance testing is a non-functional software testing technique that determines how the stability, speed, scalability, and responsiveness of an application holds up under a given workload.

Responsivene

Speed

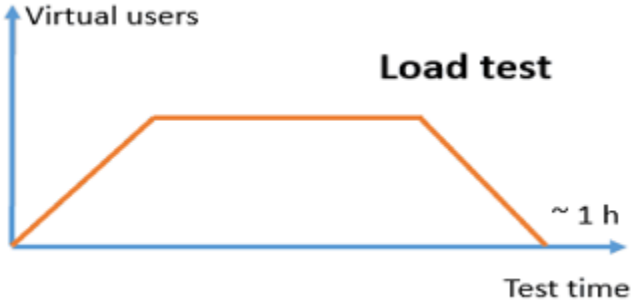
Scalability

Stability

Performance Testing Types

Load Testing

- To verify application behavior under the expected normal and peak user loads.
- The aim is to identify performance gaps before the application goes live.

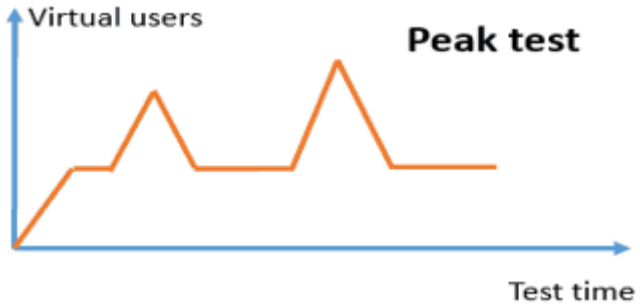


Stress Testing

- To find the breakpoint of the app, it pushes the app beyond normal load conditions to determine which components fail first and to know how the app will behave .

Spike Testing

- To evaluate the ability of the app to handle sudden increase in load, to determine whether performance will suffer, the system will fail, or it will be able to handle dramatic changes in load.



Endurance Testing

- To evaluate the performance of the system under load over time

Performance Testing Metrics

Performance Testing Metrics

- **Response Time:** It is the total time between sending the request and receiving the response.
- .**Throughput:** It measures the number of transactions an application can handle in a second, The higher the Throughput is, the better is the server performance.

Performance Testing Metrics Cont.

- **Min and Max**: The minimum and maximum response time.
- **Error %:** It is the percentage of requests resulting in errors compared to the total number of requests.
- **Average latency/Wait time:** It is the time spent by a request in a queue before getting processed.

JMeter

Why JMeter?

- JMeter is a free, open-source performance measurement tool written in Java
- User friendly GUI Design.
- Controllers are configurable and can monitor the server performance.
- Test results can be captured in various format like summary report, Graph, Aggregate report, Aggregate graph, Results in tree and Results in Table.
- Reporting: supports different formats like text, XML, HTML and JSON.

Performance Testing Using JMeter Demo!