PERFORMANCE TESTING

@DIGITEST

THE FUTURE

Performance Test Engineer

PERFORMANCE TESTING

1. A non-functional testing type.

2. This type of testing determines or validates:

- Speed
- Scalability
- Stability

Of the system or application under test.

=> 3S <=

PERFORMANCE TESTING

“Performance” refers to information related to the application:

- **Response times**
- **Throughput**
- **Resource utilization levels.**

RESPONSE TIMES

Time of each transactions took to complete. Response time is defined as the delay between the point of request and the first response from the product.

THROUGHPUT

Throughput represents the number of request / business transactions processed by the product in a specified time duration.

Throughput = Request / Time

WHY DO PERFORMANCE TESTING?

- Access production readiness
- To compare two platform
- Find the source performance problems
- Support system tuning

PERFORMANCE TEST TYPES

- **Load Testing**
- **Stress Testing / Spike Testing**
- **Endurance Testing**
- **Volume Testing**

LOAD TESTING

- This subcategory of performance testing.
- Study about behaviour of the application under various loads.
- To check how the application handles concurrent users effectively.
- Main parameter to focus: Response time

STRESS TESTING

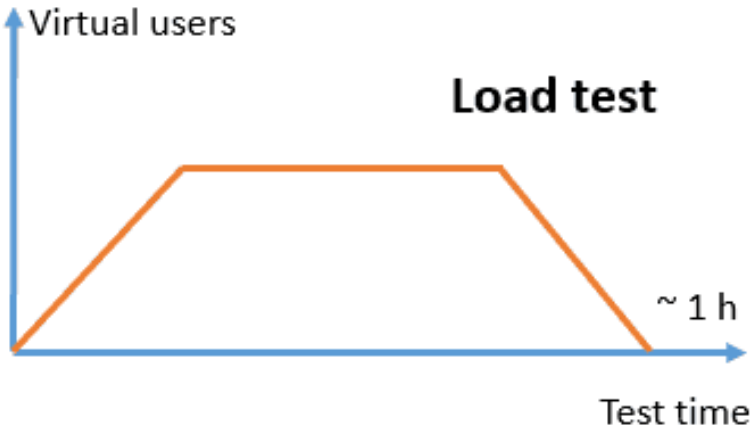
- This subcategory of performance testing
- Stress Testing help us to observe the stability of the application.
- The main intention is to identify the breaking point of the server. The main parameter to focus is throughput (how much data is being transferred between client and server).
- Main parameter to focus: Response time and Throughput

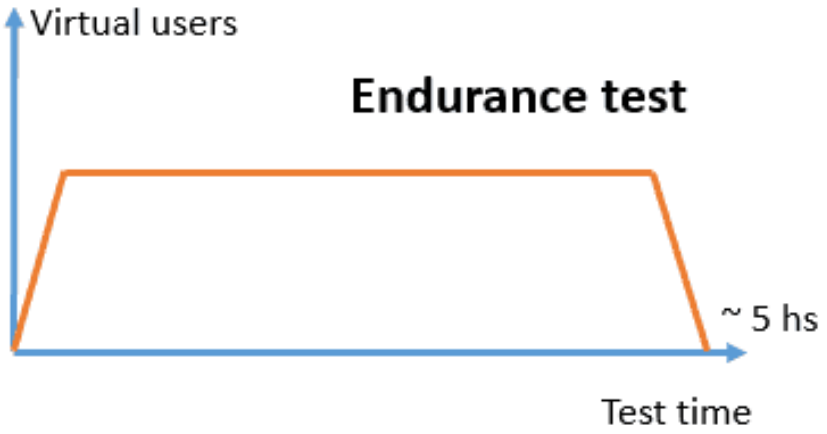
ENDURANCE TESTING

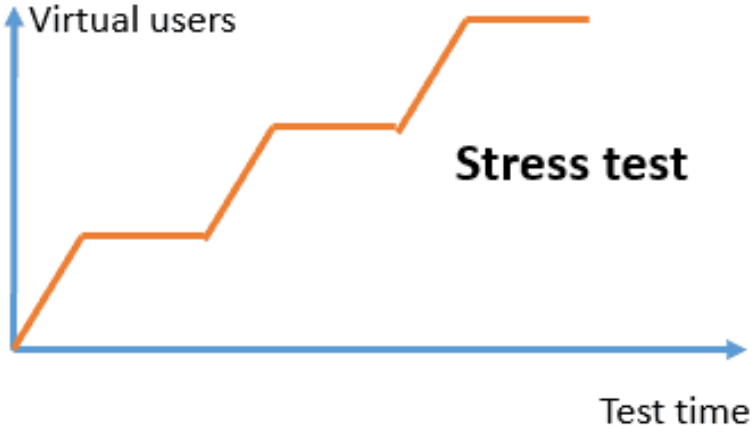
- **Endurance testing reveals about memory utilization when you load your test for prolong executions.**
- **If you execute your test 1 hour to perform load testing. But in endurance testing, you execute your test at least for 8 hours with significant load.**
- **Main parameter to focus: Memory**

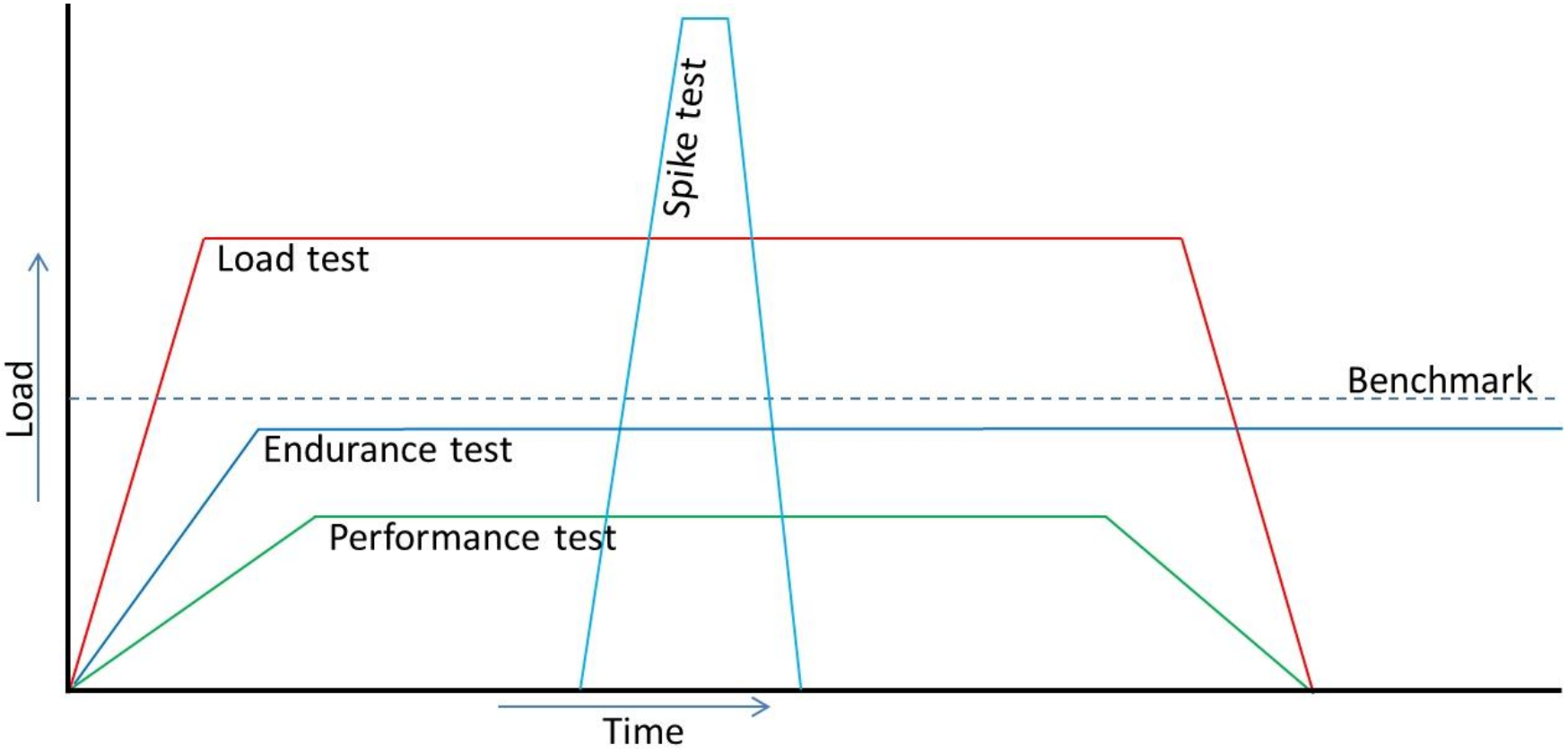
VOLUME TESTING

- **Volume Testing is performance to identify whether the server can handle more number of high complex queries under significant load.**
- **The main intention is to observe how the database acts under various circumstances.**
- **Main parameter to focus: Response Time of Queries**


Virtual users
Load test
~ 1 h
Test time


Virtual users
Endurance test
~ 5 hs
Test time


Virtual users
Stress test
Test time


Spike test
Load test
Load
Benchmark
Endurance test
Performance test
Time

PERFORMANCE TEST TOOLS

- Jmeter
- Gatling
- Load Runner

LINKS

https://msdn.microsoft.com/en-us/library/bb924356.aspx