Abstract

Any application developed for millions of users requires being tested for its performance, scale, UI and backend aspects. Some of the existing load test tools like JMeter, Tsung, MQTT Malaria do not provide a generic interface to mimic all real-time scenarios. The existing tools can help in achieving a high scale load but do not help in following a user journey of an application at a vast scale where user journey refers to follow actual action path user perform while using the application in real time. The solution to this is the analytic approach used to perform user journey in the application, which helps in identifying bottleneck and stress point easily. In this paper, the focus is on an analytical load testing tool and approach used for load testing various services supporting any protocol. The tool approach comprises robust modular design pattern, scalable for incorporating any new test plan for a load test. A dynamically synchronize report shows graphical stats generated after every load test execution which can be analyzed to detect endpoints. The proposed approach helps to stress the backend/DB/Caches both vertically & horizontally supporting any protocol. The work demonstrates architectural design pattern, generation and execution of test plan and load simulation by analytic Load Runner tool. The
framework can mimic the real-time user scenarios and generate specific load.

References

1. Load Multiplier web site, https://loadmultiplier.com/
3. Apache JMeter™ http://jmeter.apache.org/
4. Attacking MQTT systems with Mosquittos (scalability and load testing utilities for MQTT environments) https://github.com/remakeelectric/mqtt-malaria

Index Terms

Computer Science
Software Engineering

Keywords

Analytics Load Test, analytics performance testing, automated testing and tools, performance and load testing, stress testing, testing mindset, and psychology