Objective: The objective of the test is to analyse if the system supports 500 concurrent users.

To achieve this we can conduct multiple types of performance testing's. I listed below different types of testing.

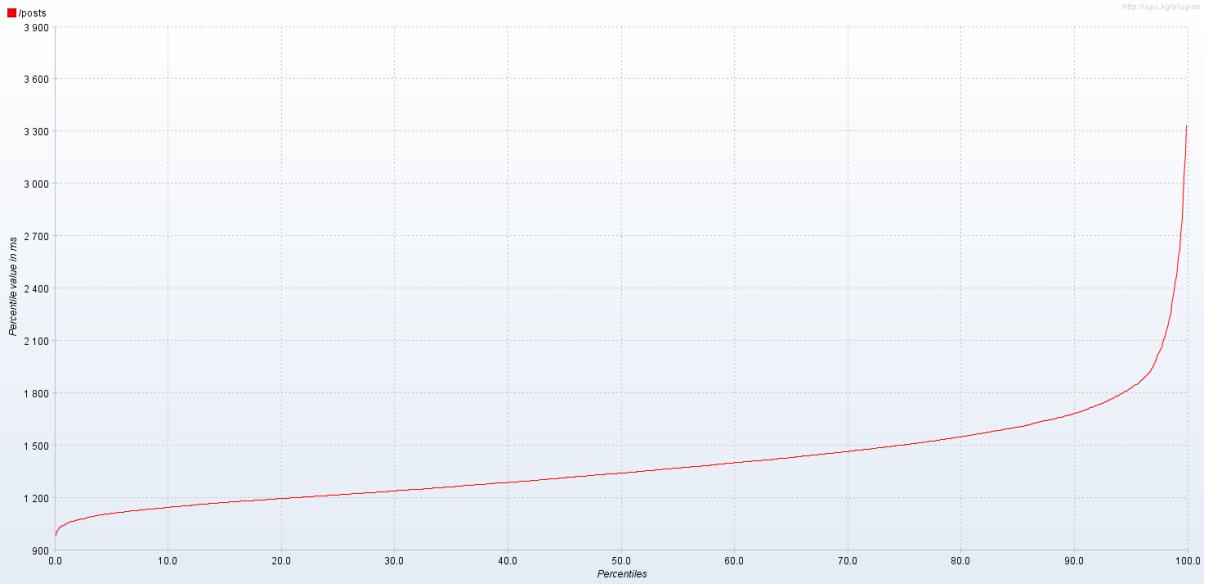
Load test:

Instead of simulating the users with maximum load, repeat the tests with by starting the lower no.of concurrent users and based on the test results increase the load to maximum.

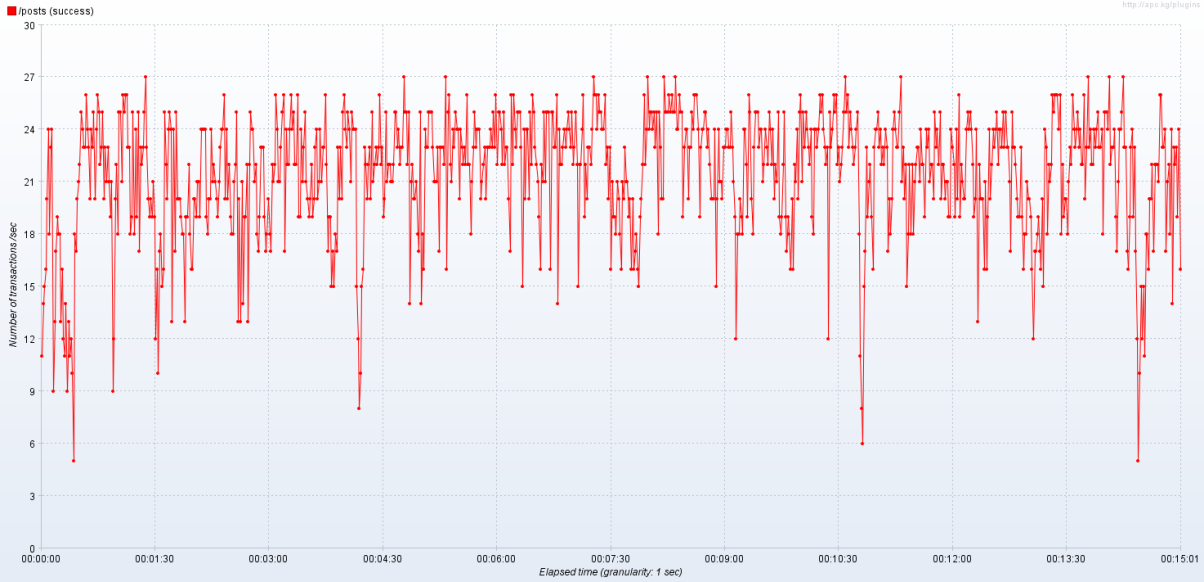
Repeat the tests with 10, 50,100,200 and 500 concurrent users with 15 minutes duration of each test.

Graph for Active threads over time for 30 CU/Sec

Response times percentiles for 30 CU/Sec. Average response time is 1.3 seconds



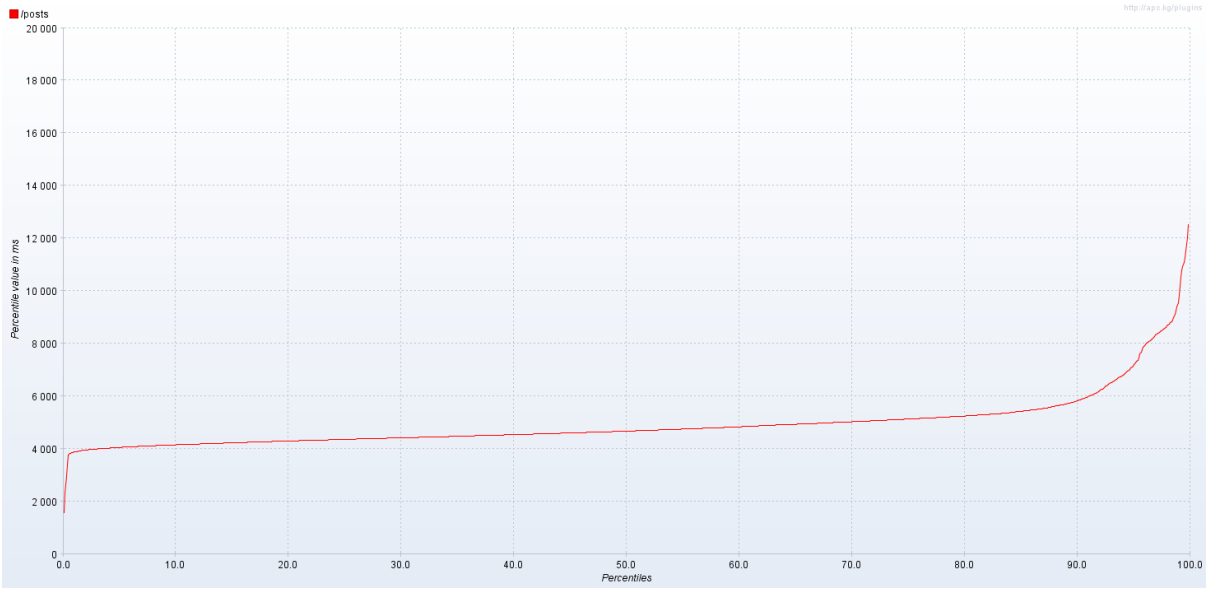
Transactions per second. Average throughput is 21 requests/sec



With the above graphs we can say that API is handling only up to the 25 req/sec and responses times increasing above 1 second for 30 req/sec, ideal response time should be below or equal to 1 second.

Graph for Active threads over time for 100 CU/Sec

Response times percentiles: Average response time tis 4.9 seconds

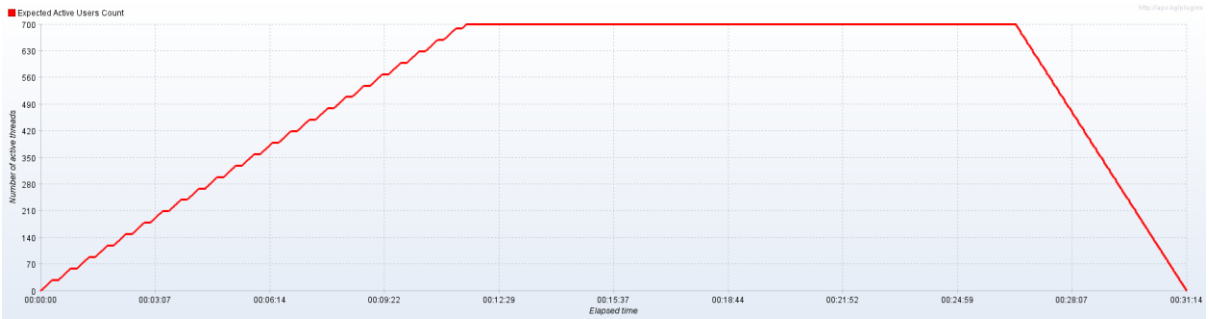


Transactions per second: Average throughput is 20 req/sec.

Stress test:

If everything fine with the load test , then we need to find the break point of the System with a stress test .Continue the test with the beyond peak load.

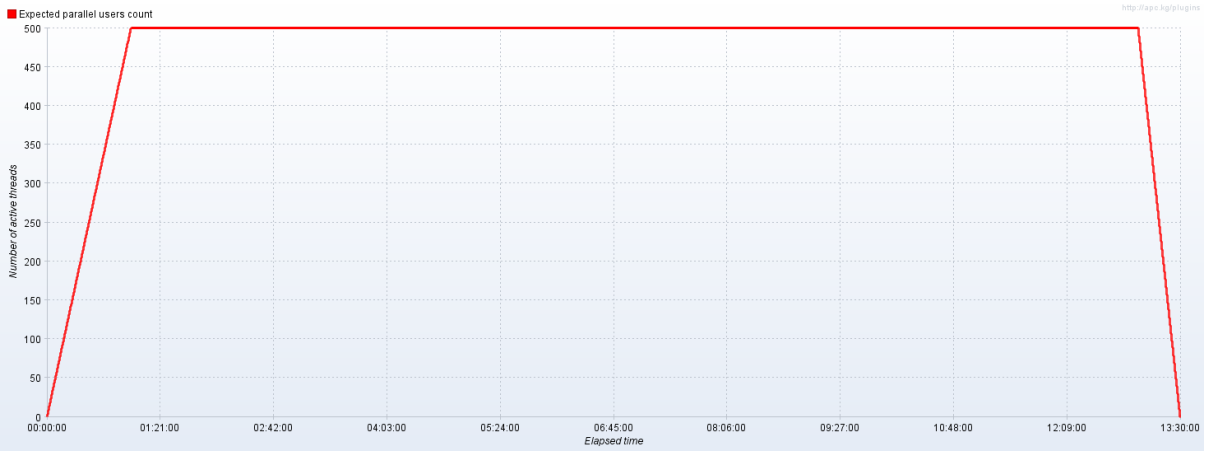
Used Stepping thread group to simulate the users. Here is the sample graph for users simulation.



Endurance test:

With this application is tested with the larger duration to check the stability of the APIs. Run the tests with maximum load for a longer period of time.

Used the Ultimate thread group to simulate the users for a longer period of time. Here is the sample graph.



Spike testing:

With this Application is tested with unusual increment and decrement in the loads.

Used Ultimate thread group to simulate the users. Here is the sample graph