

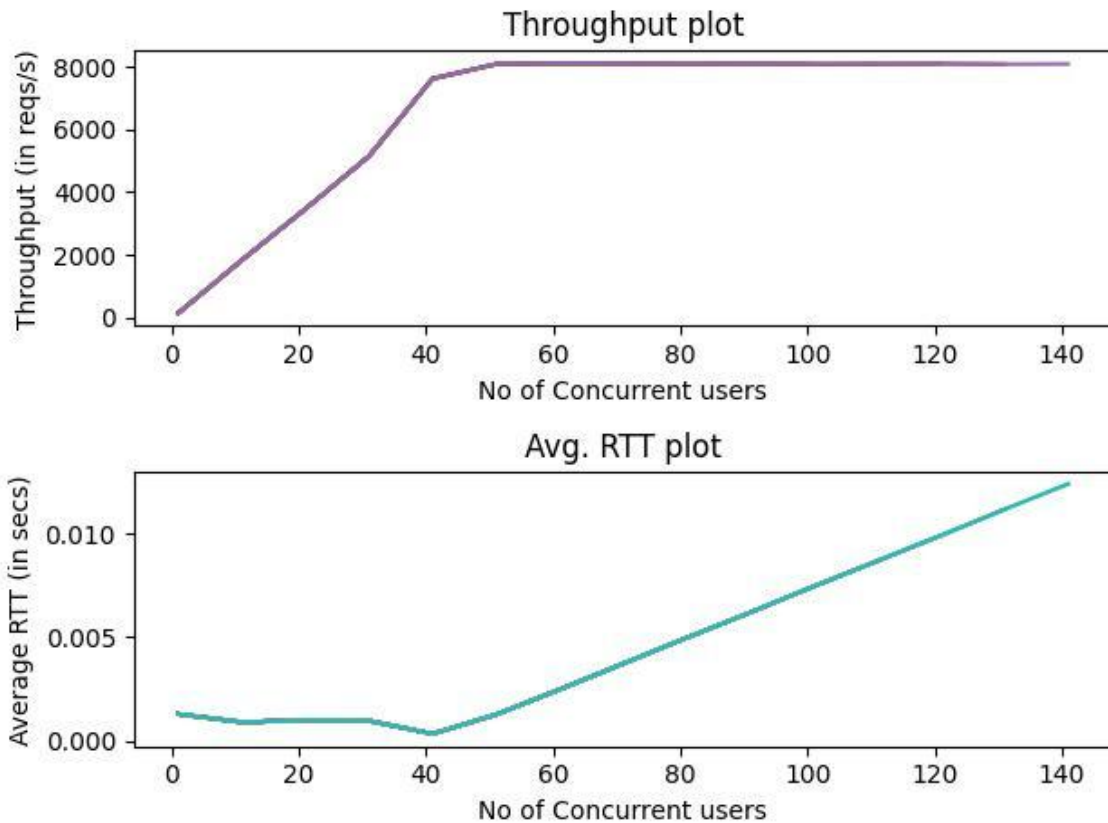
PA4: Closed Loop Load Testing

Shivansh Dhiman, 22m2120

The test has been performed on a machine with the following specifications

- Physical CPU cores: 2
- Logical CPU cores: 4
- Cores used by Webserver: 1
- Cores used by load generator: 3
- Number of requests per second generated by a user: 200

This is the final graph for the output where we can see the server reaching its capacity under load. The graph on the top plots the throughput of the server at a given number of concurrent users. The graph on the bottom plots the Average Round Trip Time of the requests.



The graphs consist of two cases:

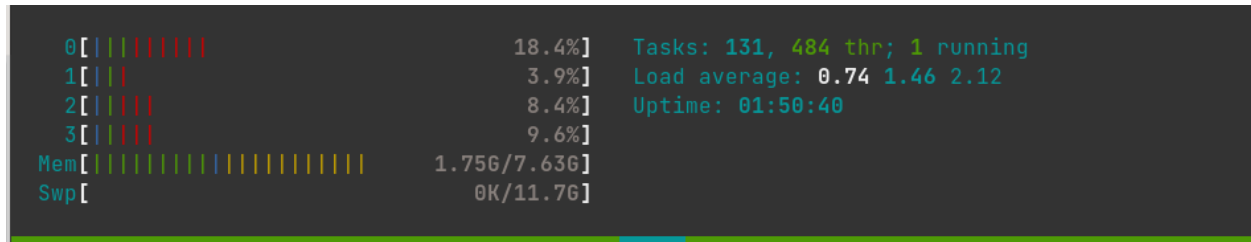
- Case 1: In this phase, the webserver is able to service all the requests it receives from the load generator and the Throughput, i.e, the number of requests per second

increases with the increasing number of users. The system resources are poorly utilized and the average response time is also low.

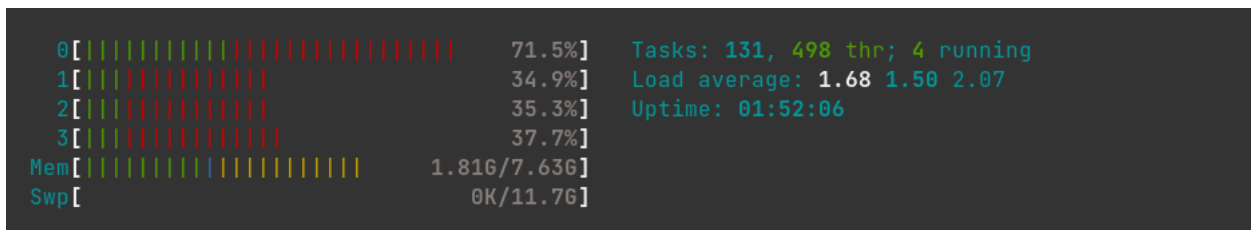
- Case 2: In this phase, the webserver is experiencing load and its Throughput is saturated. It is no longer able to handle more requests. Throughput is flattened out after a certain point. Average roundtrip time also increases due to queueing of the requests at the bottleneck.

Screenshots of “htop” at various times during the testing.

- During low load:



- During moderate load



- During high load

