CS333 - Lab2

Samarth Mishra 130260018

Pradyot Prakash 130050008

January 22, 2016

1 Question 01

The experiment was conducted by connecting two laptops using a router through LAN cables. One of the computers hosted the server and the other the client.

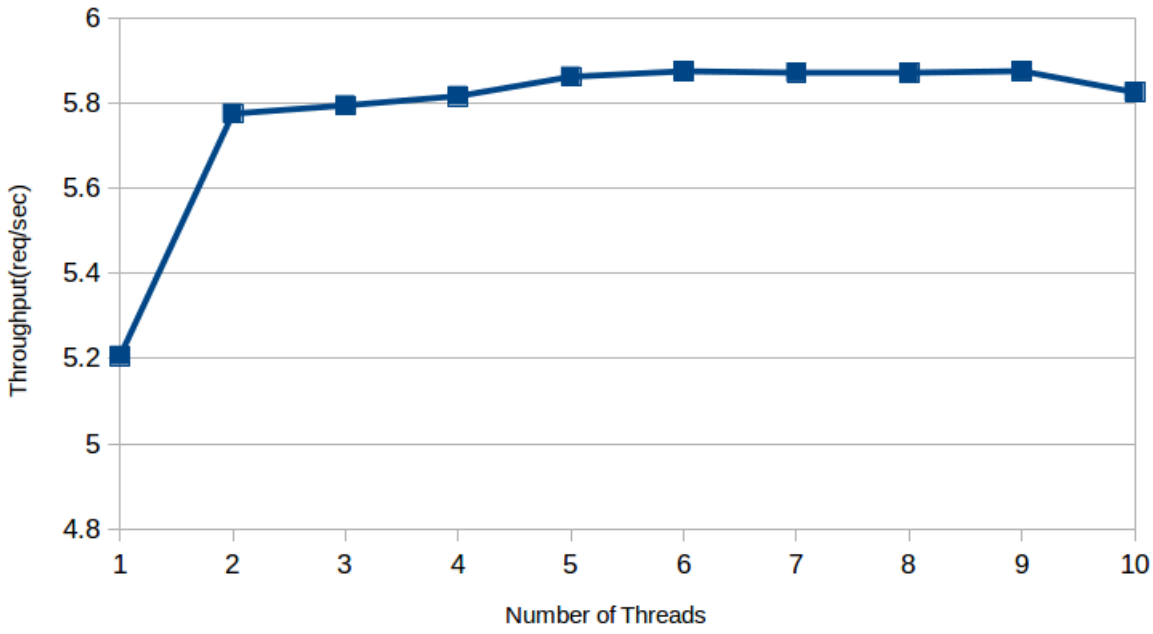
i. Maximum read bandwidth of the server: 46000 kB/sec : which translated to around 23 requests per second

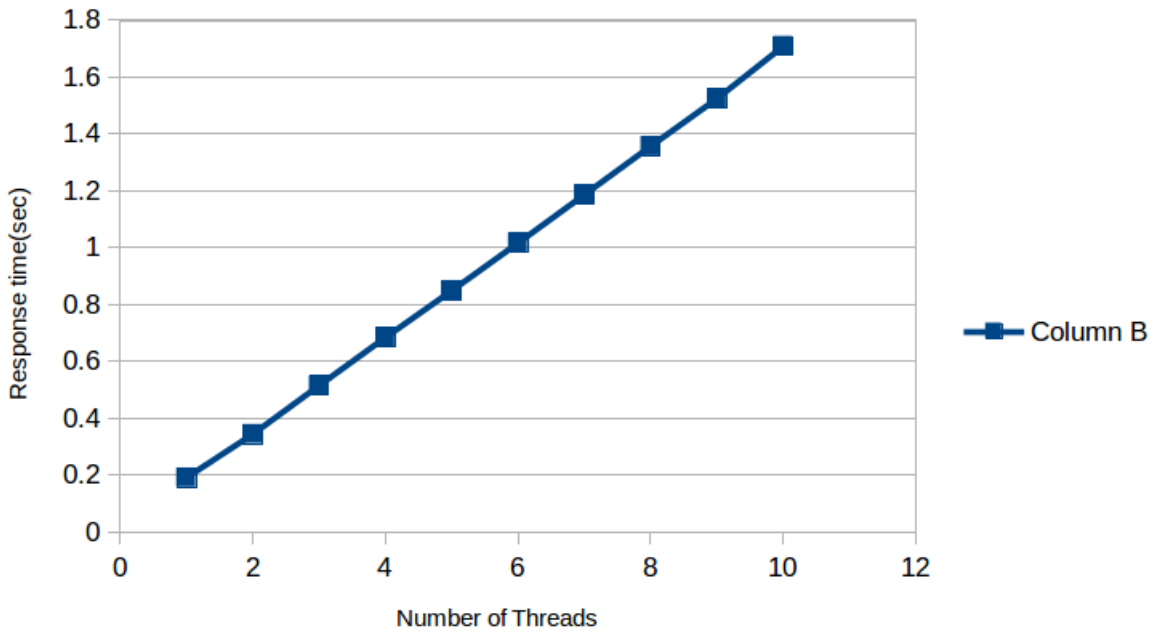
ii. Maximum network bandwidth: 11.8 MBps = 94.4Mbps which translates to around 5.9 requests per seconds(calculated using 'iperf')

2 Question 2

a. The optimal value of N at which the server saturates: 4

b. Graphs:





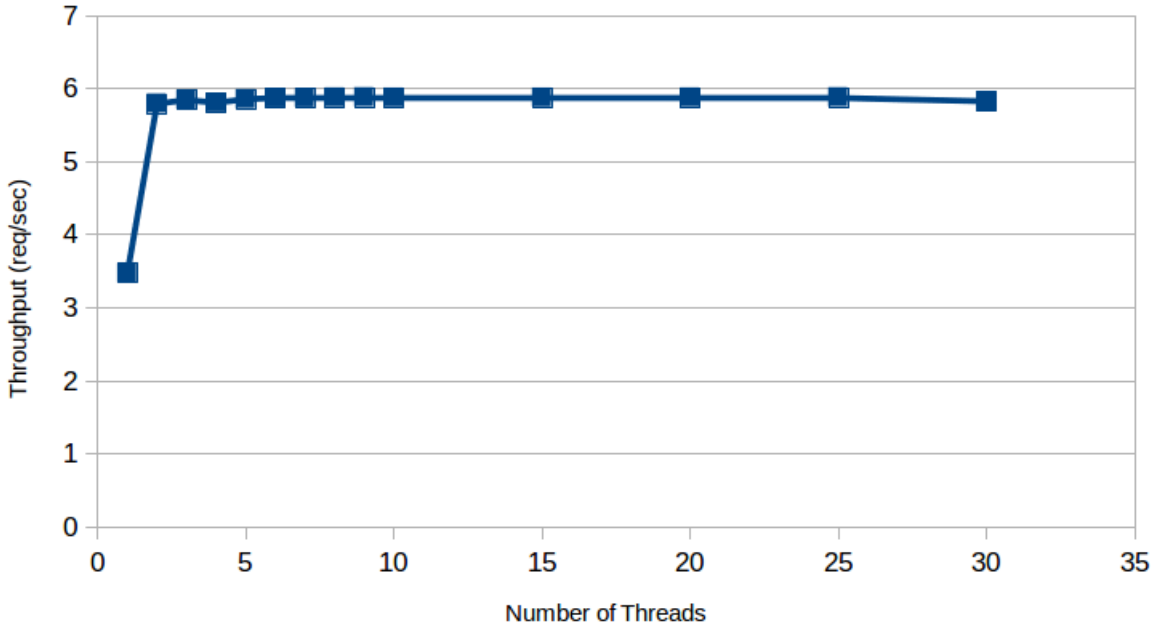
c. When the server is at saturation, the network bandwidth is the bottleneck resource. The network utilization checked using 'nethogs', was close to 11.7 MBps which is about 100% utilization of the network bandwidth

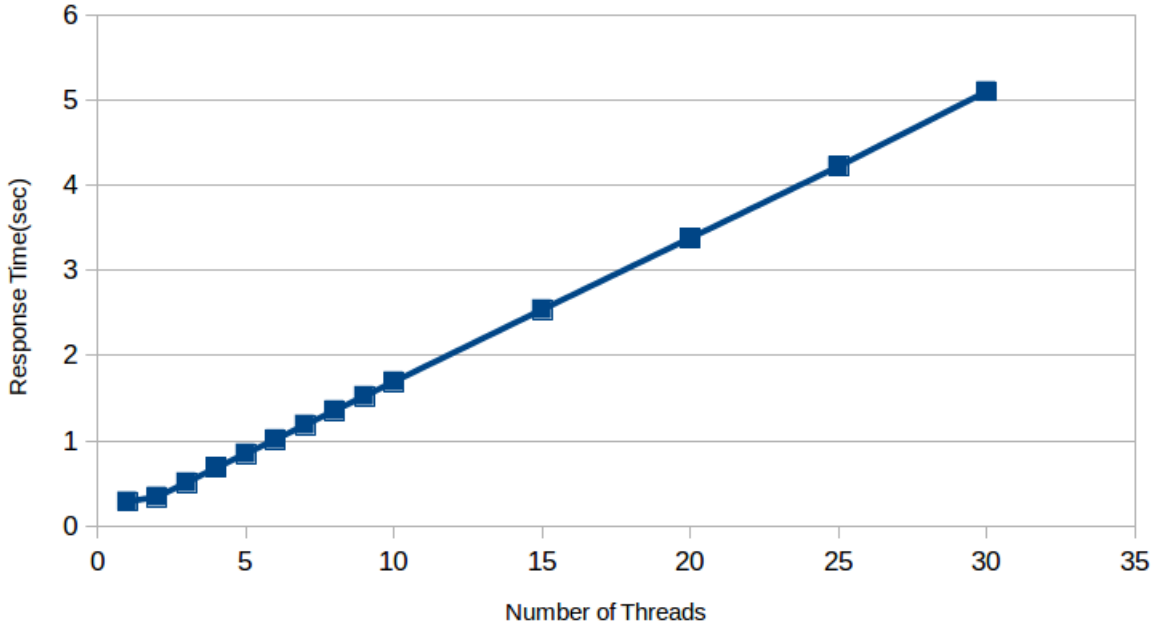
d. The saturation throughput(5.87 req/s) is almost the same as that calculated by the network bandwidth bottleneck

3 Question 3

a. The optimal value of N at which the server saturates: 3

b. Graphs:





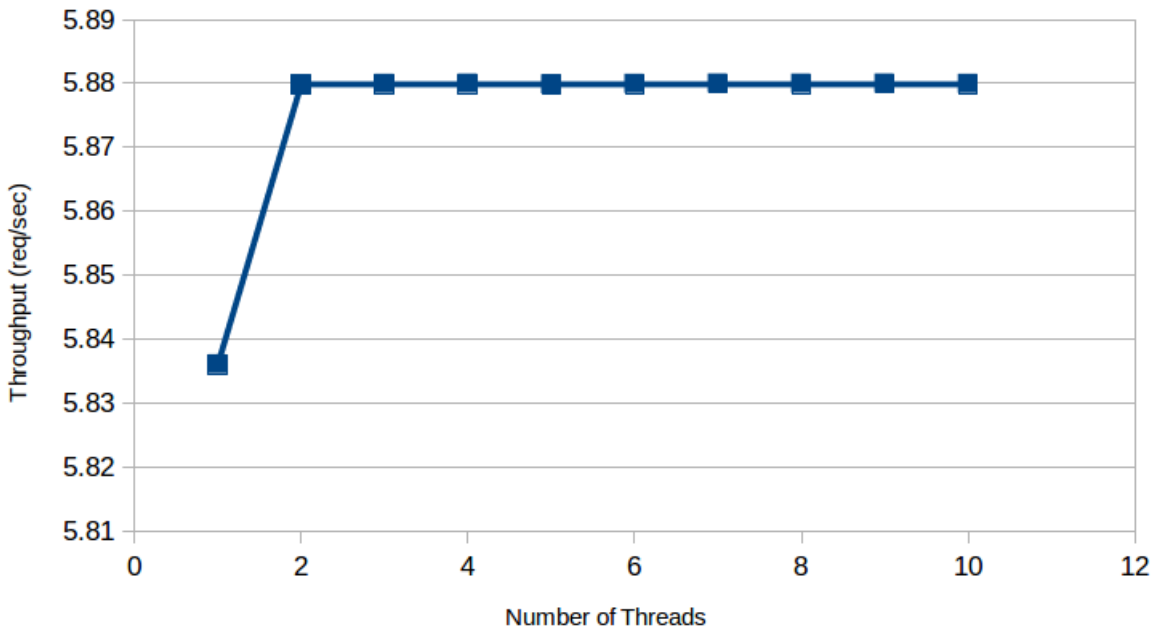
c. When the server is at saturation, the network bandwidth is the bottleneck resource. The network utilization checked using 'nethogs', was close to 11.7 MBps which is about 100% utilization of the network bandwidth

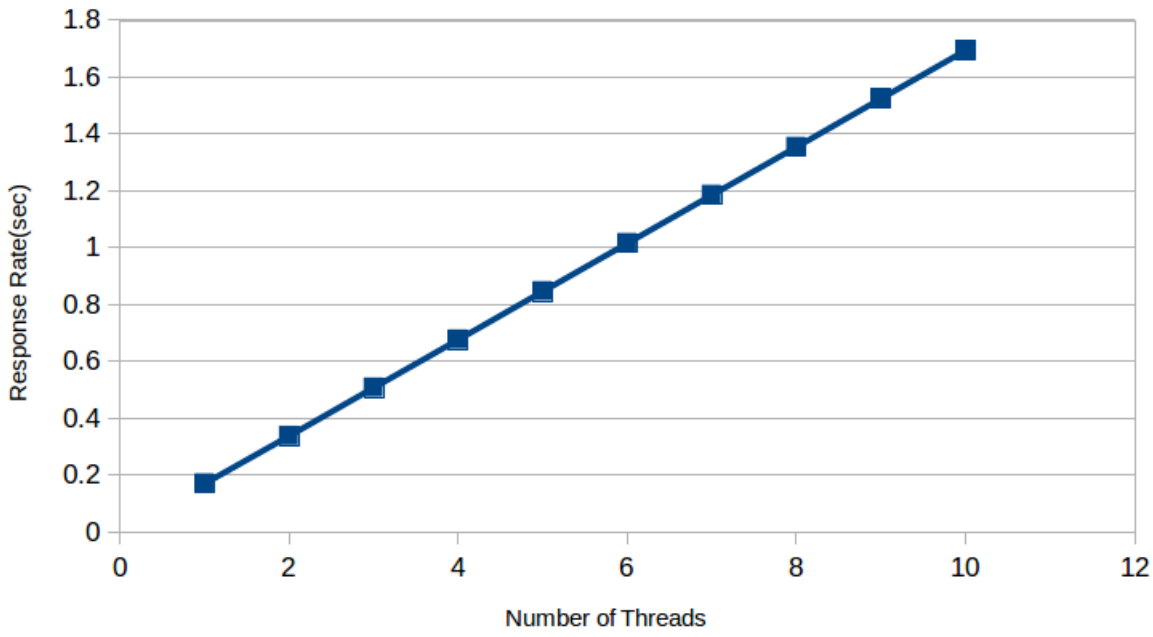
d. The saturation throughput(5.88 req/s) is almost the same as that calculated by the network bandwidth bottleneck

4 Question 4

a. The optimal value of N at which the server saturates: 2

b. Graphs:





c. When the server is at saturation, the network bandwidth is the bottleneck resource. The network utilization checked using 'nethogs', was close to 11.7 MBps which is about 100% utilization of the network bandwidth

d. The saturation throughput(5.88 req/s) is almost the same as that calculated by the network bandwidth bottleneck