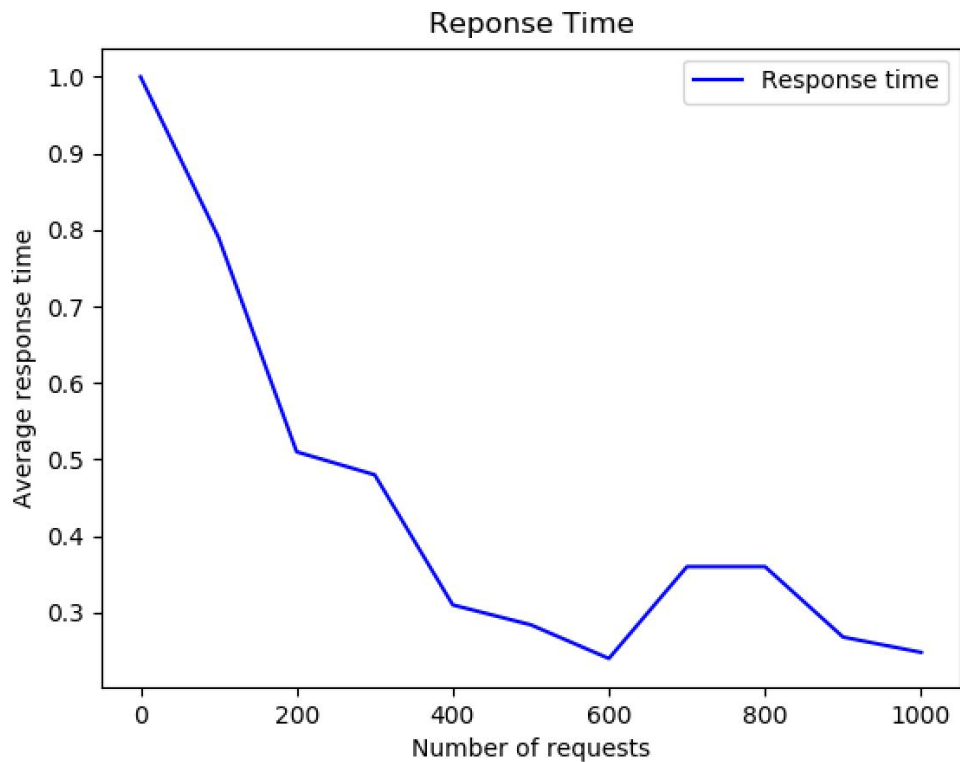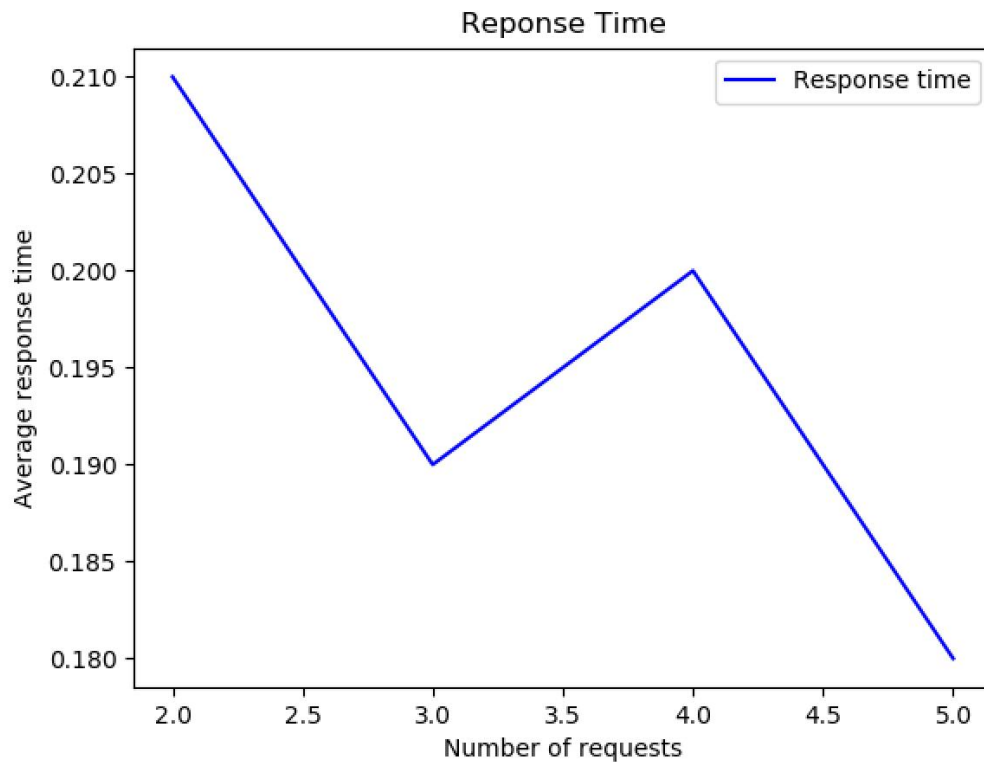# Performance

System and hardware specs:

Window 10

Intel-i7 7700 HQ 2.81Ghz, 8GB

For Average single request:

we deploy 1 peer and 1 indexing server on the same machine and send request to server from 100 to 1000 times and compute the average response time for the search request. The worst situation when the requested file does not exist in any peer's folder. The number of the search requests varies from 1000 to 10000 and the average response is decreasing, from 0.79s to 0.248ms.

For Average multiple request:

Reponse Time

We setup 2,3,4,5 clients respectively and each round we make 1000 request to server concurrently on each client and the average time is a little bit dropped which is not obvious by client numbers, from 0.21s to 0.18s.

Result for single request:

```
      at java.util.Scanner.throwFor(Unknown Source)
C:\Users\steve\Desktop\P2PfileSystem\client1>java ClientMain
==============P2P File System=============
1 Registry
2 Search
3 Download
4 Multiple Request
5 Quit
=========================================
4
average running time under 0 requests :NaNms
average running time under 100 requests :0.79ms
average running time under 200 requests :0.51ms
average running time under 300 requests :0.48ms
average running time under 400 requests :0.31ms
average running time under 500 requests :0.284ms
average running time under 600 requests :0.24ms
average running time under 700 requests :0.36142857142857143ms
average running time under 800 requests :0.36125ms
average running time under 900 requests :0.2688888888888889ms
average running time under 1000 requests :0.248ms
```

Result for multiple request:

```
average running time under 0 requests :NaNms
average running time under 100 requests :0.26ms
average running time under 200 requests :0.22ms
average running time under 300 requests :0.21ms
average running time under 400 requests :0.205ms
average running time under 500 requests :0.196ms
average running time under 600 requests :0.20833333333333334ms
average running time under 700 requests :0.2257142857142857ms
average running time under 800 requests :0.19625ms
average running time under 900 requests :0.19333333333333333ms
average running time under 1000 requests :0.192ms
4
```