# Evaluation part – II

Following is the result of evaluation performed on different file sizes.

8 Servers are running concurrently.

Files of different sizes getting transferred. Files sizes are 1KB, 10KB,100KB, 1MB, 10MB, 100MB and 1GB

File Size	Number Of Files	Total File Size	Time required(Seconds)	Number of bytes sent per second
1KB	10000*8	80 MB	77.319	1034674.5
10KB	1000*8	80 MB	10.520	7604562.7
100KB	1000*8	800 MB	26.762	29893132.0
1MB	100*8	800 MB	8.4532	94638716.6
10MB	100*8	8000 MB	62.969	127046641.9
100MB	10*8	8000 MB	55.636	143791789.4
1GB	1*8	8000 MB	50.798	157486515.21
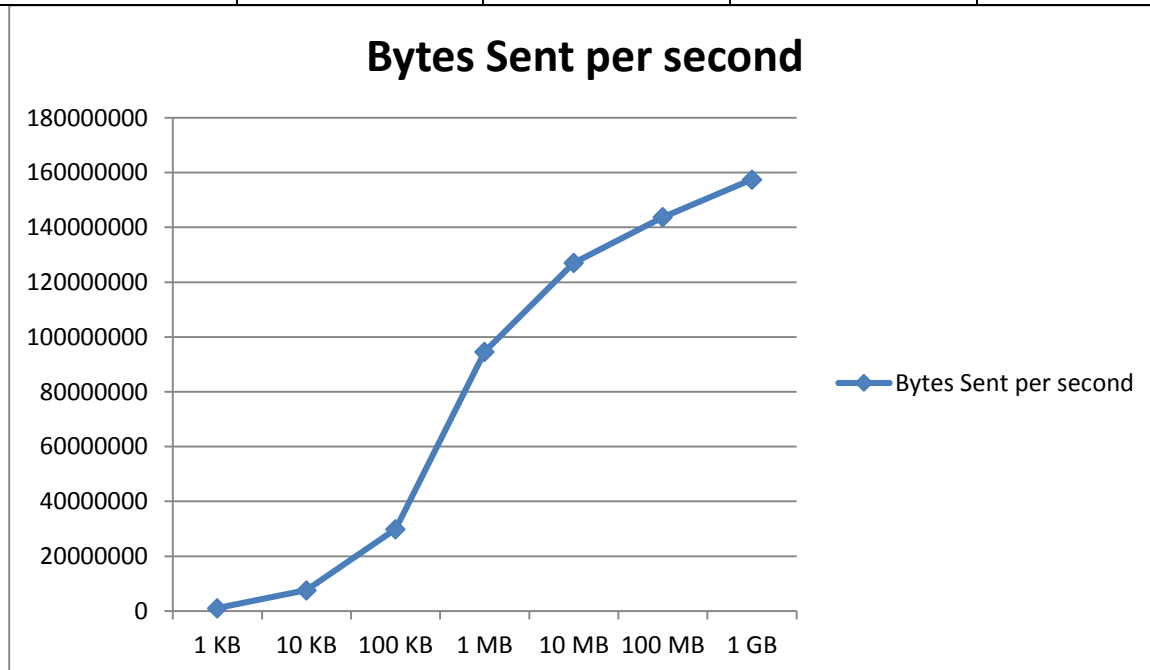
Analysis of performance

As we can see from above graph that **1KB** files took **77.319 seconds** to transfer **80mb** of data at **1034674.5 bytes/ seconds** speed and **1 gb** file took **50.798** seconds to transfer **8 gb** of data at **157486515.21 bytes/ seconds** speed. This clearly shows that as we increase file sizes bytes send per second sent goes on increasing as less number of request it has to make. Less number of overhead of making socket connection and initiating a process / thread and also decreases file creation time.

Note:- I have done evaluation 2 on windows as I am facing issue on ubuntu. Laptop is getting heated and it is abruptly shutting down the system hence, I was not able to complete evaluation on ubuntu so used windows. This can can sucessfully run on linux as well as shown in output file.

1. 1KB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 10000 Files
Total Number of files system processing : 80000(8 * 10000)
Each file Size : 1 kb
Time required for obtain operation :

Bytes/Second sent = (80,000 * 1000) / 77.319 = 1034674.5 bytes
                Files   File_Size

2. 10KB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 1000 Files
Total Number of files system processing : 8000(8 * 1000)
Each file Size : 10 kb
Time required for obtain operation :

Bytes/Second sent = (8000 * 10000) / 10.520 = 7604562.7 bytes
$\qquad$ Files $\qquad$ File_Size
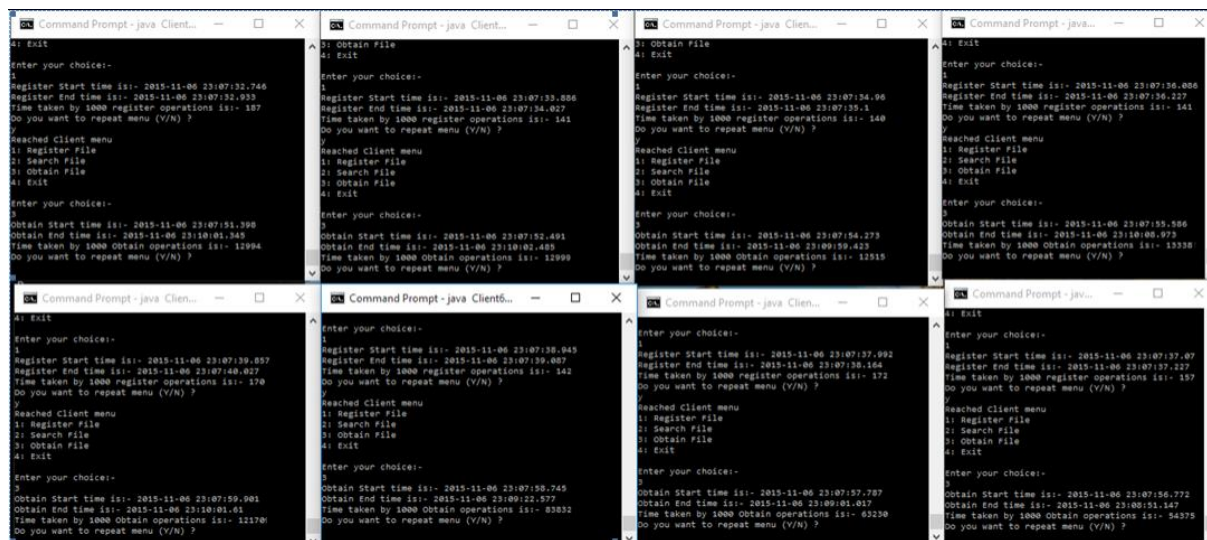
3. 100 KB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 1000 Files
Total Number of files system processing : 8000(8 * 1000)
Each file Size : 100 kb
Time required for obtain operation :

Bytes/Second sent = (8000 * 100000) / 26.762= 29893132.0 bytes
                            Files   File_Size

4. 1 MB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 100 Files
Total Number of files system processing : 800 (8 * 100)
Each file Size : 1 mb
Time required for obtain operation :

Bytes/Second sent = (800 * 1000000) / 8.4532= 94638716.6 bytes
                              Files   File_Size

5. 10 MB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 100 Files
Total Number of files system processing : 800 (8 * 100)
Each file Size : 10 mb
Time required for obtain operation :

Bytes/Second sent = (800 * 10000000) / 62.969= 127046641.9 bytes
                          Files   File_Size

6. 100 MB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 10 Files
Total Number of files system processing : 80 (8 * 10)
Each file Size : 100 mb
Time required for obtain operation :

Bytes/Second sent = (80 * 100000000) / 55.636 = 143791789.4 bytes
                     Files   File_Size

7. 1GB file evaluation:

Total Number of Peers Connected : 8
Files each server processing : 1 File
Total Number of files system processing : 8 (8 * 1)
Each file Size : 1 gb
Time required for obtain operation :

Bytes/Second sent = (8 * 1000000000) / 50.798 = 157486515.21 bytes
$$\frac{Files \quad File\_Size}{}$$