

**CSE 589 Modern Network Concepts**  
**Assignment #1**  
**Distributed File Sharing System**

**Analysis Document**

#### 4.1 Data Rates vs. File Size

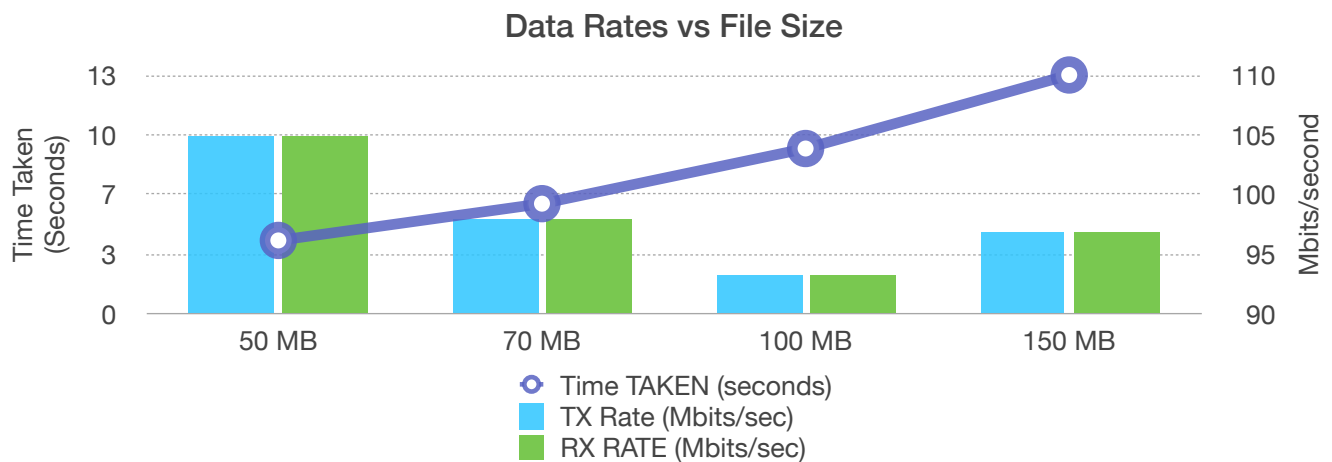
The packet size is 1000 Bytes.

File chunk size is also 1000 Bytes.

As the file size increases, the time taken should increase. This is because we have more number of bytes to send/receive. The data rate is not dependent on the file size but we can expect changes in the data rate due to network traffic.

**Data Rates vs File Size**

FILE SIZE	TIME TAKEN (SECONDS)	TX RATE (MBITS/SEC)	RX RATE (MBITS/SEC)
50 MB	4	105	105
70 MB	6	98	98
100 MB	9	93	93
150 MB	13	97	97



The analysis result supports my claim. As the file size increases, the time taken increases and the data rate changes possibly due to network traffic.

#### 4.2 Data Rates vs Packets Size

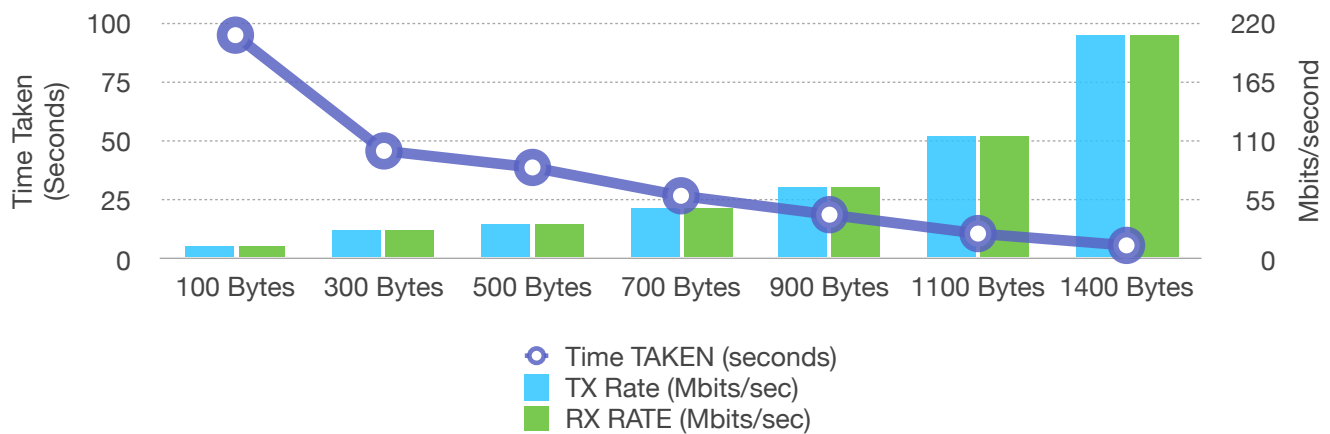
As the packet size increases, the data rate should increase. This is because we are able to read and send more number of bytes in a single packet.

The file chunk size is equal to my packet size.

Data Rates vs Packet Size

PACKET SIZE	TIME TAKEN (SECONDS)	TX RATE (MBITS/SEC)	RX RATE (MBITS/SEC)
100 Bytes	95	13	13
300 Bytes	46	27	27
500 Bytes	39	32	32
700 Bytes	27	47	47
900 Bytes	19	66	66
1100 Bytes	11	114	114
1400 Bytes	6	161	161

Data Rates vs File Size



The analysis result shows that my claim was correct. As the packet size increases, the data rate also increases.