ANALYSIS

The system was analyzed under different conditions by varying the packet size, file size and the number of hosts. Following were the observations made.

Packet Size vs Time

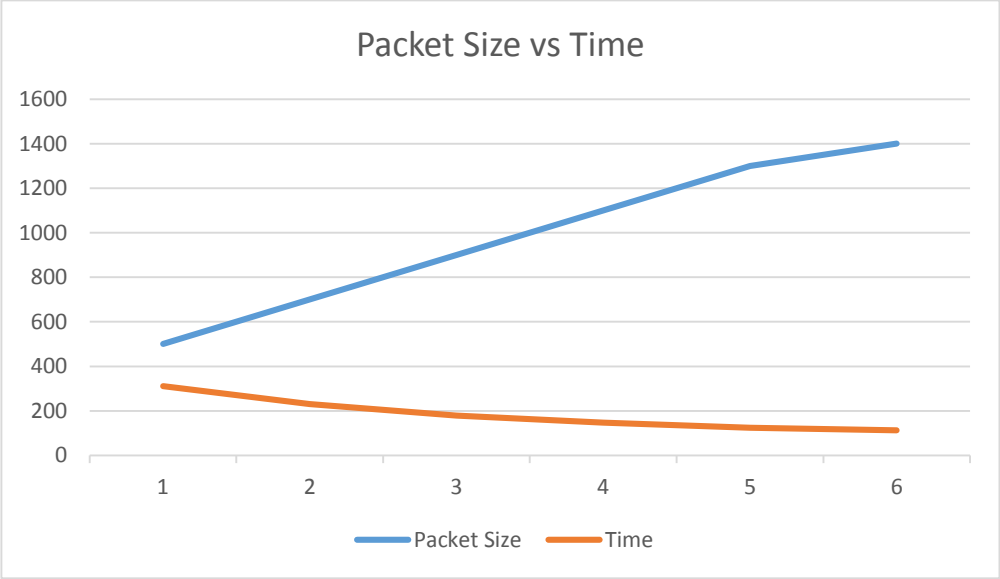
In this case, the file size was kept constant at 154MB and the packet sizes were changed from 500 bytes to 1400 bytes. It was observed that with the increasing packet size, total transmission time reduced considerably. The main reason for such a variation is because of the buffer size kept within the application. The larger the chunk size, the lower will be the number of packets transmitted. Thus leading to reduced total transmission time.

Constant

File Size – 154 MB

Hosts - 1

Packet Size	Time	Transmission Rate(KB/SEC)	Packets/Sec
500	311	495	990
700	230	670	957
900	178	865	961
1100	147	1048	952
1300	124	1242	955
1400	113	1363	973



Number of Hosts vs Transmission Time

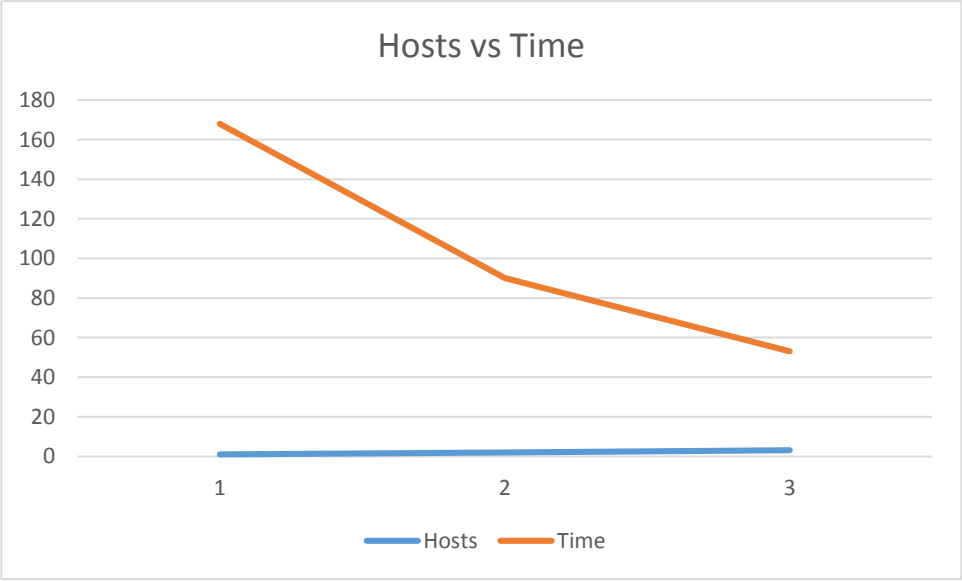
In this case the number of hosts were changed and the file size and packet size were kept constant. The number of hosts were changed from 1-3 and the following observation was made.

With the increase in number of hosts the transmission time reduced. This is primarily because of parallel download from more than one machine.

Constant

File Size – 154 MB
Packet Size – 1000 Bytes

Hosts	Time	Transmission Rate(KB/SEC)	Packets/Sec
1	168	917	917
2	90	1711	1711
3	53	2906	2906



File Size vs Time

In this case the file size was changed between 10MB and 154 MB and was downloaded from a single host. The packet size was kept constant at 1000 bytes.

It was observed that with increasing file size, the total transmission time increased linearly.

Constant

Packet Size – 1000 Bytes

Hosts - 1

File Size(MB)	Time	Transmission Rate(KB/SEC)	Packets/Sec
10	11	909	909
50	54	926	926
77	81	951	951
102	106	962	962
154	162	951	951